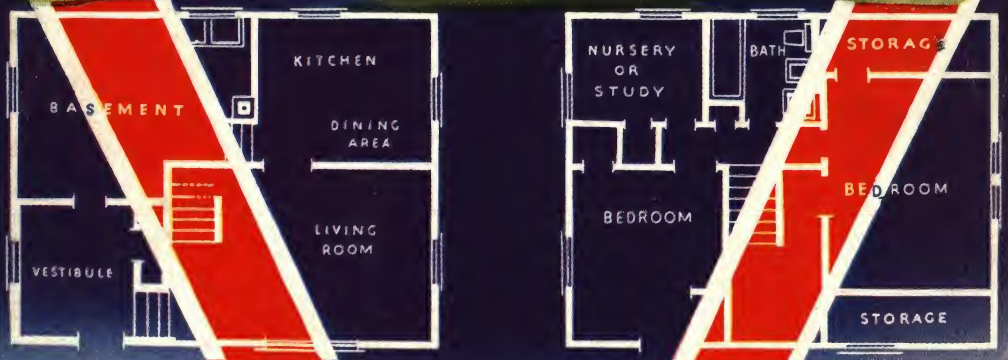
DESIGN ★ FINANCING ★ CONSTRUCTION ★ EQUIPMENT ★ FURNITURE & DECORATION ★ GARDENING

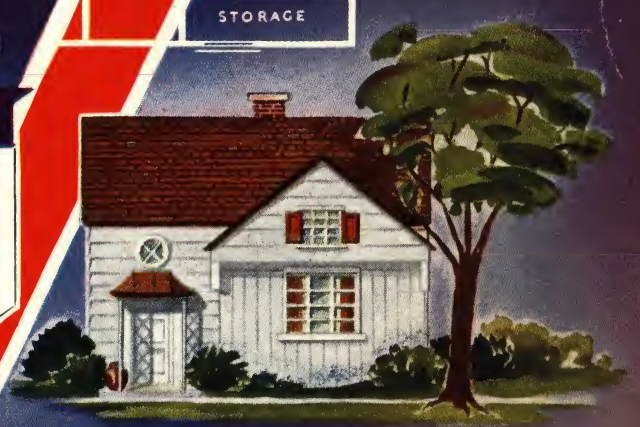
SMALL *Homes* GUIDE

25¢



FEATURING

THE *Victory* HOME

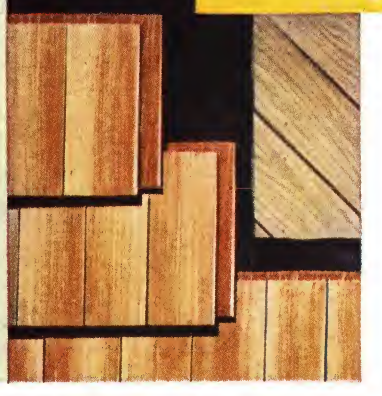


Waldo McKinney, Architect, Seattle

"Larry, let's have sidewalls like these for our small home—aren't they beautiful!"

Double-Coursing is Economical

Because the Cedar Shingles in double-coursing are laid with a very wide weather exposure and because it is possible to use No. 2 grade for the exposed course and No. 3 for the concealed course, great economy is effected over other sidewalls of similar quality, sturdiness and attraction.



Easy to Rejuvenate by Double-Coursing

Old homes, garages, stores and auto camps can easily be made modern and attractive with double-coursed Cedar Shingles right over the old sidewalls. Then again, Shingles are the most practical material for new roofs and for over-roofing right over the old roof. Ask your lumber dealer or contractor for particulars.

Your home may be smaller, yes, because of the war emergency. Nevertheless, you may be sure of beauty and comfort at low cost with roof and sidewalls of Red Cedar Shingles. They are not listed among the "critical" building materials and are readily available.

Your best defense against weather is a roof of Red Cedar Shingles. Throughout the years they have proved their sturdy qualities in resisting torrential rains, heavy snows, extremes of heat and cold, hail storms, and hurricanes. The known insulating quality of Red Cedar Shingles is an important factor in comfort and fuel saving.

The modern method of applying Red Cedar Shingles for sidewalls is by Double-Coursing *(as illustrated at left)*. With this method, the wide smooth surfaces of the shingles are pleasantly relieved by deep, horizontal shadow lines. Though Double-Coursing is quite simple, we will gladly send you free technical data and blueprints for consultation with your architect or contractor.

Address—Red Cedar Shingle Bureau, Seattle, Washington, U. S. A., or Vancouver, B. C., Canada

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CERTIGRADE

Red Cedar Shingles

SOLD EVERYWHERE

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SMALL *Homes* GUIDE

8th EDITION | Published by National Homebuilders Bureau, Inc. New York | 25c PER COPY

P-50
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The outstanding feature of 1942 is the *Victory Home.* Its story is woven throughout this book. We present here the basic facts to help you toward home-ownership . . . more important today than ever before.

"We Will Always Be

DONALD M. NELSON, head of our nation's War Production Board which has given full recognition to the urgent need for comfortable housing for our Soldiers of Production. Priorities aid is given as a means of providing the needed housing in the officially designated defense areas both new homes costing under $6,000 and the conversion of old homes into multi-family dwellings.

HOW THE GOVERNMENT REGULATION OF BUILDING AFFECTS YOU

THE War Production Board on April 9, 1942, issued an order limiting construction to housing and projects which will further the War effort. Here's what you can do!

• **You Can Build a Home.** Priorities assistance to help you build your home, costing up to $6,000, will be granted if you live in one of the officially designated "defense areas." The construction materials and equipment must conform to the "critical list," summarized for you on Page 6.

• **Your Government Wants You to Build.** The War Production Board has made provision for 200,000 privately-built homes to be built in conformity with the regulations mentioned above.

• **You Should Do Repair and Maintenance Work. You do not need permission** to remodel, convert, or repair, **if the estimated cost is less than $500.** FHA Pay-Out-of-Income Plan (see Page 28) will insure this work for you. Under this plan you can provide extra living space; make an extra room in your attic; repair your roof, or provide for economical fuel consumption by insulating your home. If you want a new roof costing over $700 you do not need permission as there is no restriction on any repair or maintenance work actually needed to "return a structure to sound working conditions without a change in design." These are but a few examples of what can be done under FHA Title 1.

• **Additional Living Accommodations Urged.** You can remodel for extra living quarters, if you live in a defense area and receive an A-5 preference rating on scarce materials up to $800. Again, FHA will assist you in transforming a large house into several apartments. The Home Owners Loan Corporation offers technical advice, without charge, on such projects, as this remodeling provides an ideal method of making extra living accommodations available with a minimum of time and materials. Additional legislation further liberalizing the present terms is contemplated by Congress.

• **Productive Farm Building Approved. You do not need permission** to construct new productive farm buildings, **if the estimated cost is** less than $1,000.

• **How to Apply for Permission to Build.** Your local Federal Housing Administration office will accept your application on Form PD-105A, as shown on Page 5, for authority to start building your home. These forms are available at any FHA office. The FHA officer will then recommend the application to the War Production Board for final approval.

Recognition of the importance of homes for Citizen Soldiers is given to the nation by this Government order. **The Victory Home is here dedicated to you, Soldiers of Production.**

Building America!" **FRANKLIN DELANO ROOSEVELT**

JOHN B. BLANDFORD, JR., Administrator of the new National Housing Agency, has but one main objective—the creation of sufficient war housing as speedily as possible.

While he is in command of every government housing facility, which he will push to the limit to get the job done, he is fully aware of the role the private housing industry should play during the months to come and will extend to it on behalf of the government every reasonable assistance to enable it to come through with its contribution.

The SMALL HOMES GUIDE can assure its readers that Administrator Blandford appreciates the importance of this contribution. "At this time the government can no more do the war housing job without the aid of the building industry than it could the building of tanks, planes, guns and ships," he told the editor. "The new allocation by WPB of 200,000 priorities for private industry tells the story of what is expected of the builders. That is an important part of the housing need as we see it now and I have every reason to believe that need will be met."

In the National Housing Agency itself, Mr. Blandford has placed the function of programming the need for housing for war workers. He doesn't believe, however, that this can best be done in Washington. "As much as possible of the responsibility for determining the need, for site selection and for planning should be placed right in the community where the housing is to go," he says. "The municipal officials, local housing authorities, real estate boards, trade organizations, labor groups and other interested bodies and individuals have intimate knowledge of local conditions. They are the ones to advise on how it should be done."

John B. Blandford, Jr., heads the nation's housing program as Administrator of the National Housing Agency. The National Housing Agency includes two divisions to aid private construction, the Federal Housing Administration and the Federal Home Loan Bank Administration, and one public housing division, the Federal Public Housing Authority.

In other words, he is decentralizing the authority in this regard.

Mr. Blandford points to the various ways in which the government is cooperating with the home building industry. He looks upon the priority system as a "best friend" to guide and help the home builders, rather than as a "policeman" to curb them. Priorities are the government's assurance that materials will be available for the war housing that hits the target, and that there shall be no waste of these materials by use that will not directly help in the war effort. In the programming of war housing, provision is made for private construction to the degree that the industry can perform in each locality.

Also, through the Federal Home Loan Bank System, home financing institutions have access to an ample credit reservoir, and through Federal Housing Administration insurance, lenders are substantially protected against risk. Extensive research activities will provide basic information for charting the course of the industry.

"We are all tied together in this job of licking the Axis, and both private and public housing must march hand in hand to provide shelter for our soldiers of production," is the way Mr. Blandford puts it.

DEDICATED TO OUR SOLDIERS OF PRODUCTION

This to the End That They May Realize the Happiness and Security, which Invariably Result From Sensible Home Ownership

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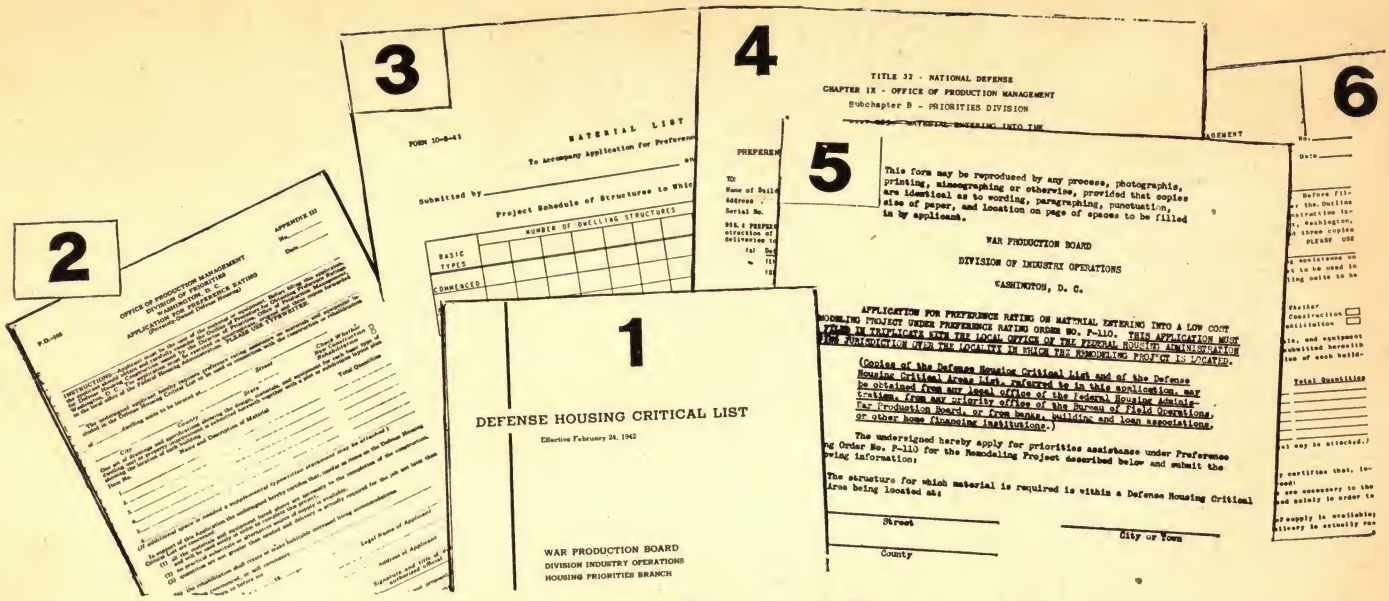


How to Get Priorities

FOR NEW HOMES . . . FOR REMODELING

PRIORITIES are the Government's assurance that materials will be available for War worker housing. The preference rating system was installed and priorities recently allocated for 200,000 privately built homes in defense areas to make sure that our Civilian Soldiers have decent places in which to live.

Priorities are only concerned with materials on which there is a marked shortage . . . mostly metals. With the impact of the war program upon the national economy, housing operations in every field have been affected by the shortages in the products manufactured from critical metals. To expedite the building of these essential homes for war workers of all classes, these defense housing ratings are in the "A" class—which means that they are considered urgently needed to strengthen our national defense. Plants manufacturing tanks, guns, shells, and other essentials of national defense, cannot be operated, and ships cannot be built without workers and *workers must have places to live!* Thus the priorities system helps those who can build under the War Production Board's restrictions while conserving materials ordinarily used for non-essential construction.

What can be done and what cannot be done is covered by the Defense Housing Critical List and by two far-reaching orders issued by the War Production Board, known as L-41 (limiting construction to War needs) and P-110 (making it easier for owners to remodel housing). You may obtain a copy of the Defense Housing Critical List either from your lumber dealer, your builder, financial institution, or by writing direct to the War Production Board in Washington.

DESCRIPTION OF FORMS

1. The Defense Housing Critical List—a 22-page booklet listing materials and equipment which may be used in either the construction of new homes or the remodeling of old homes for additional living quarters and on which priorities aid for the materials listed will be granted. See Digest on the following page.

2. Form FD-105A is the application for a preference rating for privately owned defense homes to be executed in quintuplicate and filed at the local office of FHA. It is endorsed by FHA to the Priority Office of the Bureau of Field Operations, War Production Board.

3. The list of materials which is made out in accordance with the Defense Housing Critical List and accompanies Form PD-105A.

4. When application form PD-105A is approved, preference rating order P-55, is issued to the builder and is extendable to the supplier. The supplier in turn can extend this rating to the manufacturer and the manufaeturer can use this rating to obtain raw materials.

5. Form PD-406 is an application for preference rating on materials entering into low cost remodeling projects. It is also filed with the local FHA office.

6. When remodeling application is approved, a preference rating order No. P-110, is issued to the builder. These applications, when approved, are granted an A-5 preference rating which is also extendable by the builder to the supplier and follows the same procedure back to the sources of raw material.

For New Homes

If you want to build a home costing under $6000 and you live in a defense area, you should make application on Form PD-105A, obtainable and filed at the local office of the Federal Housing Administration. A facsimile of this form is shown in the illustration on this page indicated by No. 2. There the application and plans will be examined to ascertain that the following requirements are met: First, that the dwelling will cost under $6,000; second, that it is within reasonable commuting distance of a vital defense industry and adaptable to the use of war workers; third, that the amount of "critical" materials desired is reasonable and in accord with the defense Housing Critical List; fourth, whether there are available substitute materials. If all of these requirements are met, the application is passed on to the War Production Board for final examination. When this application is approved, preference rating order P-55 is issued.

For Remodeling

The War Production Board in Order P-110, effective April 10, 1942, gives an A-5 preference rating to insure deliveries of materials to builders and their sub-contractors doing this type of work in defense areas. This type of construction is exempt from the provisions of the conservation order, L-41, restricting construction.

A Victory Message

TO MR. AND MRS. AMERICA

YOUR home is an important line of defense in these strenuous days of battling the evil forces that would take away our security and independence. Our government has approved privately built defense housing as an essential part of our war effort. In this Victory Edition of the *Small Homes Guide*, we provide a meeting place for the war worker, our government, and the building industry. We try, in these pages, to point the way for you to "own a piece of America."

Digested for you between these covers are the basic facts of home building today. You will find information on how to finance, plan, build, furnish, and decorate your home. We tell you how to plant a Victory Garden, and ways to get recreation out of your back yard.

American resourcefulness and ingenuity are meeting a real test now. Out of the restrictions placed on materials required for our war machine, have come many excellent substitutes, to insure you an enduring and satisfactory home.

Economy is the motivating factor behind many decisions these days. We firmly believe that you live in a much thriftier and more satisfactory manner in a home of your own.

The home building industry, retail lumber dealers, and home financing institutions are ready to cooperate with you.

After you read the article, "The Nortons Decided to Build," we think that you will agree that building a home is not an involved and expensive process, but the highway to providing security, comfort and happiness for your family. It is the American way of life!

With the American home as our tradition and inspiration, we shall not find any sacrifice too great. We only seek to know and to do the thing that will help our country in defending these homes. As Americans we are concentrating on Victory. Victory requires morale—morale which can in large part be furnished and renewed daily by the security and happiness that comes through home ownership. And, for this, we thank God. It is a precious thing.

A. W. Underwood Jr.

Publisher

HOW TO GET PRIORITIES . . .

The material requirements for remodeling are also governed by the Defense Housing Critical List. Owners are not permitted to sell or rent any dwelling unit included in the project at prices higher than those approved on the application. In any case, the monthly rental—less certain service charges—cannot exceed $50 for each dwelling unit and the sales price cannot exceed $6,000 for each single family accommodation.

Get your lumber dealer or your builder to apply for preference rating on Form PD-406 which should be filed in the local office of the Federal Housing Administration. These forms are available in the local office of FHA, at any priority office of the Bureau of Field Operations of the War Production Board or at banks, building and loan associations, or other housing institutions. You may ascertain if you are in an officially designated defense area and get information regarding the Defense Housing Critical List at any local office of FHA.

What the Critical List Is

The production of housing has been in competition with other war needs, and because of this fact, it has been necessary to regulate the amount of such critical materials which may be used in a home. Without priorities assistance, these materials are not available. *Note:* This list is based on the present critical position of many materials and is subject to revision as changes in the situation develop. Highlights of the present critical list are:

S S S

• **Structural Requirements:** Gutters, flashing, and down spouts must be phosphate or zinc coated—26 gauge ferrous sheet metal. Builders and cabinet hardware as provided in code worked out in cooperation with hardware manufacturers in Federal Specifications for Builders' Hardware. For example, garage hardware must use hinge type No. 2209, 12″, three to door, thumb latch bolt, etc., and use no overhead types. Rough hardware includes nails, and screws for rough and finished carpentry. Zinc coated nails must be used for roof covering, exterior sheet metal and wall ties.

• **Electrical Requirements:** Outlets are detailed for each room. For example, four each are permitted in living room, kitchen and bedroom; three each in dining room and utility room; two each in bathroom and halls. Service entrance: fuse or automatic type of over-current devices allowed. Interior wiring: neutral cable and non-metallic sheath cable, service cable allowed for range and domestic water heater circuits. Lighting fixtures: copper for carrying parts only.

S S S

• **Plumbing Requirements:** Eligible materials and quantities limited to those necessary to minimum requirements of Emergency Plumbing Standards for Defense Housing. Fixtures: each home is allowed choice of shower or bath; two water closets, one lavatory; laundry tray (single or double); kitchen sink (single), or combination sink and laundry tray. Ferrous metal domestic hot water heater and storage tank (20 gallons) with control equipment; water softener with ferrous metal tank.

S S S

• **Heating:** Insulation required limiting heat loss to a maximum sixty-six BTU per square foot of living area or 80,000 BTU (whichever is smaller). The critical list gives details re: floor furnaces, space heaters, pipeless gravity furnaces, gravity furnaces, and forced air furnaces. Boiler only for heating systems serving two or more dwellings. Ducts, connections, etc., limited to ferrous sheet metal (untreated or phosphorous treated—not heavier than 26 gauge) in accordance with current standards of NBFU. Sheet metal double ducts, sheet metal return ducts beyond six feet from heater not eligible. Oil storage tanks (where oil burning equipment is not prohibited) 275 gallon capacity, ferrous metal, with no metallic coating. Oil and gas burners control equipment includes pressure control, thermostats, damper regulators, relays, and solenoids.

S S S

• **Ranges and Refrigerators:** To be of type available in the industry. Incinerators for multi-family dwellings only.

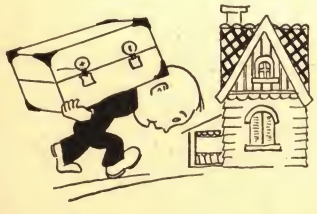
The Nortons DECIDED TO BUILD

EDITOR'S NOTE: The following story about the Nortons and their experiences in acquiring a home, is based on actual fact. An American couple, whose name really isn't Norton, were faced with all of George's and Mary's problems, and the history of their home, from their first wish for one, to its completion is set forth here. What the Nortons did, you can achieve, too.

WHEN George Norton was offered a good job in Steeltown at the armor plate works, he and Mary, his wife, came down to the town, looking for a place to live. A brief survey of Steeltown, however, showed them that housing themselves and their three children was going to be a real problem. The only places they could find for rent

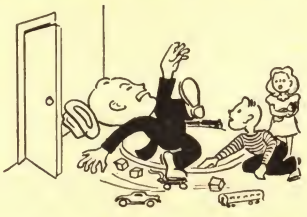
were some gloomy flats over stores, some oversized, run-down Victorian mansions with too many rooms and obsolete equipment, and a few new houses far out in the suburbs for which fantastic rents were being asked.

Small compact, modern homes, the kind Mary Norton knew would be the most economical to run on their income, were simply not available. For Steeltown was humming with activity, now that its machine tool shop, its safe and lock factory, and the several mills that once had made steel plate for automobiles and refrigerators, had been converted to wartime production. While it had always been a busy little city, never quite catching up on its home building, the present shortage of houses for rent was acute, with hundreds of new workmen and their families pouring in every month.



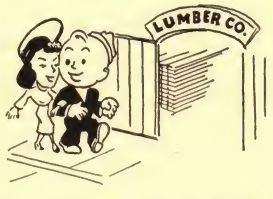
Yet they had to move in somewhere, and that immediately, for George's new job would not wait on their convenience. In the end they rented a small, dingy, three-room apartment, for which they paid $55 a month without utilities.

Several months they lived there, uncomfortable and overcrowded, with the five of them shoe-horned into one bedroom, living room and kitchen. It did not take them long to realize that this is no way to live. For one thing, young Tom was getting to be a big boy of nine, and he needed a room of his own for studying and for his stamp collection. And Lucy, too, now six years old, also deserved a little privacy and a place in which to have her little friends.



Martin, the baby, two years old, could still sleep in their room—but that room ought to be larger and have cross-ventilation, if they were all to keep well.

Mary kept on hunting for a better place to rent, but could find none. She realized that since their rent was over $65 a month, if the cost of utilities was included, they could probably save some money if they could build and pay off the cost of the house on a long-term mortgage basis. Finally, after many an evening's discussion and much budgeting, the Nortons began to think of building their own home.



So one Saturday afternoon they went to the Steeltown Lumber Company's office, to talk their problems over with the customers' representative, Mr. Atkins.

As they entered the office, they noticed some photographs of homes on the wall under which was a banner sign reading "THESE ARE VICTORY HOMES."

After they had been introduced to Mr. Atkins, Mrs. Norton asked, "What is a Victory home?"

"The Victory Home is the outstanding value in Defense Housing. Defense Homes are any houses costing $6,000 or less, including the lot, which are built in a defense area," said Mr. Atkins. "The government has established hundreds of defense areas throughout the country, where wartime industries are active, and in these areas it is possible to get priorities assistance to build your own home. Steeltown is a prime defense area, and we can always get priorities to help you to build."

"I suppose that means the government will help you get bricks and lumber and all that," said George.

"Not exactly, for those are not what are called critical materials. We can supply you with all those things you need. No, the priorities system helps you to get the various metals and other critical materials which are absolutely necessary in your house—plumbing, heating, electrical equipment and so on."

Once assured on that point, George Norton pulled some folded sheets from his pocket and spread them out before him on the desk.

"Here's our problem, Mr. Atkins," he said. "We want to build ourselves a home which will be large enough for

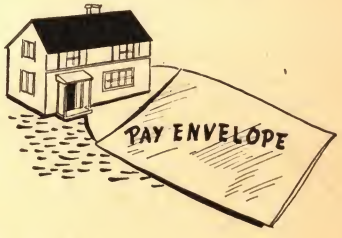
our present needs, and yet inexpensive enough for us to afford without overextending ourselves. We are paying $55 a month now, plus about $10 for utilities, and we feel we would like to spend less than that for all the costs of operating and buying our new home."

"I think we can help you out, Mr. Norton," smiled Atkins. "You have no building site, I suppose?"

"No, we haven't," George told him. "Most of us newcomers haven't had the time to look around for land. We'd hoped you could help us out on that, too. We have a little over $600 saved up, and we feel we can afford to invest it all in a new house. Does that seem like a reasonable amount?"

Atkins pulled over a large map of Steeltown, and unfolded it on the desk.

"It will do very nicely," he told them. "Under the defense housing set-up, the maximum cost of a house on which priorities assistance will be granted is



$6,000; and if you want an FHA-insured loan, the down payment is $600, plus perhaps a couple of hundred more when the house is finished, for settlement fees. Now, I suppose the first thing you want to look at will be house plans—but while we're still on the subject of lots, let's try and select a building site

first, as the kind of house you will build should be suitable to the neighborhood and lot. If you will take a look at this map—"

He proceeded to show them the major types of subdivisions and a large number of the single lots available in Steeltown. They discussed price, size of lot, type of improvements (such as water, sewerage, paved streets, electric and gas lines, relative accessibility to George's work) and they finally weeded out a selected list of six locations for their needs. Rejected were all of the newer subdivisions, since they seemed too far out, and since Atkins told them that the FHA was not too sympathetic to new developments which required a lot of new critical metals for the installations of utilities.

"Now that we've got this far, let's see what the Rankin Real Estate people can do for you on these locations," said Atkins, reaching for the phone.

"Look, Sandy," he told the realtor, "I'm sending Mr. and Mrs. Norton over to see you. They are thinking of building a home here in town, and I've given them a list of some of the lots I think are available and which fit their needs. Will you run them around and show them the places? . . . Swell! Do that!"

As he hung up, he said, "Sandy Rankin is the best realtor in town. I'm sure he'll fix you up. He's coming right over here in his car." He reached into a drawer and pulled out a copy of *Small Homes Guide.*

"While you're waiting, you might as well look through this book. There are a number of house plans. It will give you many helpful ideas. Take it along with you, and study it."

SEVERAL days later, Mrs. Norton came into the Steeltown Lumber office again.

"George and I have picked out a lot, Mr. Atkins," she said, "and we have a pretty good idea of the kind of house we want, too."

"That's fine!" said Atkins. "Now we can get to work. Have you signed up for the lot yet?"

"No, I thought I'd like to talk it over with you first to make sure we could build the house we want on it."

The lot they liked was located in an established residential community of homes around ten years old. It was fifty feet wide and had a depth of a hundred and twenty-five feet.

"It's a nice location, Mrs. Norton," said Atkins. "Chestnut Street—let's see, that has city gas and electricity, as well as water and sewerage. Did you talk price with Rankin?"

"Yes, we can get it for $525. He said something about a title search—"

"That's right, Mrs. Norton, the title search is extra. It is part of what we call settlement charges. I mentioned those fees when you were in last time . . . Now if you and Mr. Norton like that lot, let's see if your house will go on it."

Mary showed him a picture of a neat one and a half story Cape Cod cottage with a sunporch on one end. "This is our first choice, but George thinks it may not fit on our lot."

Atkins studied the plan a moment. "As it is here," he said, "I'm afraid he is right. With that sunporch, the house is thirty-five feet wide. Your lot is only fifty feet wide, and in the Chestnut Street section there is a zoning restriction requiring ten foot side yards. So your house would be five feet too wide for the lot . . . Wait a moment, though. Let me call Peterson."

He pushed a buzzer and a young man entered at the back of the office.

"Mrs. Norton, this is Mr. Peterson," Atkins said. "Peterson is our staff architect, and I think he can straighten out this problem so you can use the house, by making a few changes."

The architect made some hasty sketches, experimenting with the problem of the porch.

"I think this will do it," he said. "We'll put the front door in the end of the living room instead of the long wall, and then put the house on the lot the long way, with the sunporch at the back. It will make it more private that way. Later on, when you feel you can afford to do it, you could have the porch glassed in and use it as another living room, or an extra bedroom, if necessary."

Atkins pulled a blue-covered pamphlet out of the drawer and laid it before Mrs. Norton.

"Why don't you and Peterson discuss your house thoroughly right now?" he asked. "I'm afraid I'll have to leave you. I have to go to a noon meeting of the Air Raid Wardens, but I think with the aid of this *Visagraph* you can settle practically all of your questions this afternoon."

The architect opened the pages of the *Visagraph.* "This is a very useful thing, Mrs. Norton," he said, "for it contains practically everything in your house that you need to consider. You can record your choices of materials and colors, equipment and finishes, both for the outside and the inside of the house."

"It's fascinating!" exclaimed Mary, examining the booklet. "I know—we want fieldstone for the outside walls, and—"

"Fieldstone, Mrs. Norton?" Peterson was surprised. "I'm afraid that's out of the question. It's much too expensive for this type of house. Don't forget it's a defense house you're building—it must cost under $6,000."

"Oh," said Mary, disappointed. "I never thought of that. Well, what do you suggest?"

"Why not have white Certigrade shingle sidewalls?" Peterson asked. "It fits the Chestnut Street neighborhood very well, and is inexpensive and very attractive."

For another hour or so, the two went over the *Visagraph* and *Small Homes Specifiers Annual* with care. By the time they were through, Mary had seen pictures in the *Specifiers Annual* of all the materials and equipment needed, and every last detail about the house was planned out and written down. The type of windows with the manufacturers name; the kitchen sink down to the paint choices by catalog number; the kind of floor and floor finishes; the selection of electric fixtures—all these and many more items were marked down in the *Visagraph.* Even the make and model of the stove, the furnace, and the

hot water heater were included.

"Well, that's that," sighed Mary, "and thanks for your advice, Mr. Peterson. It's been most helpful. Now I'll take this *Visagraph* home and go over it with Mr. Norton tonight. I'll bring it back to you tomorrow."

"Take along these color charts, Mrs. Norton," the architect suggested. "And these descriptions of the stove and the other equipment, too. I think Mr. Norton will want to see what you're getting, don't you?"

"He certainly will, although he usually relies on me to make final choices in things like these."

Going out, she ran into Mr. Atkins, returning from his meeting.

"I'm glad I caught you, Mrs. Norton," he said, "there's something else we might as well take care of now. Has Peterson got you fixed up?"

"Practically," Mary told him, "I just

want to go over the details with my husband tonight."

"Well, that's fine. Now I'm going to give you some forms to fill out. They have to do with your mortgage, you know. Bring them back in a day or two, and then I'll put you in touch with a good company here in town . . ."

He explained the Federal Housing Administration application form to Mary and showed her what information would be needed. Then he gave her a blank contract for the construction of the house and told her to go over that with Mr. Norton, too.

Gathering up her papers, Mary smiled. "Building a house is rather complicated, isn't it, Mr. Atkins?"

"I suppose it may seem so to you, Mrs. Norton," the lumberman said. "But, as I always say, you don't do it very often in your life—and it might as well be done right. As for all these forms, they are for your protection entirely. It is possible to get mortgage loans without FHA help, but you never get as high a percentage of the value of your house, which means that you'd have to pay down more cash. Anyhow, we make things as easy as possible for you."

"You seem to. Incidentally, my husband told me to be sure and find out what we had to do to get a priority rating on our house."

"As to that, Mrs. Norton," Atkins said, "you need not worry. We'll see that through the mill."

THERE were only a few minor changes George Norton thought advisable and they were noted on the *Visagraph*. The next day Mary took it down, along with the FHA application form and the construction contract, to Mr. Atkins. The lumberman turned the *Visagraph* over to Peterson, who showed them several sets of revised blueprints of the house they had selected.

Then Atkins said, "All right, now, get this house into the hands of a G. C. sometime this morning, Peterson . . . Get at least three bids, will you?" He turned to Mary. "We call a practical home building contractor a G. C.—general contractor you know . . . Now it will take about a week to get bids on the house, so I suggest that you might as well get started on the financial end. Let me take you down to the First Federal Savings and Loan Association. Albright there is interested in making FHA defense loans, and I think he'd be glad to help you finance your house."

At the savings and loan association, they went over the Norton project with Albright. Atkins said, "Here is their application, all filled out, Albright, and here are the three sets of blueprints and specifications. Will you get this into the works soon?"

Albright smiled at Mary. "Atkins here is always in a hurry. At that, he's probably right—for this is a boom defense town and we've got to go all out for production, whether it's armor plate, or gun stocks, or motor assemblies—or houses for defense workers . . . Sure, I'll get this down to the FHA this afternoon."

He glanced over the form, and paused at the line where the valuation of the lot was stated.

"You're paying $525 for the lot, Mrs. Norton?" Mary nodded. "And you are asking for a 90 per cent loan on a total valuation of house and lot of $5,500. So that will mean about $30 in cash to complete your down payment of 10 per cent . . ."

ABOUT ten days passed, and then one morning the mail man brought Mary a thick manila envelope from the Steeltown Lumber Company. Inside, there was a letter from Atkins which informed her that the best estimate he had obtained for the construction of

their house had come from General Contractors, Inc. It had been about $70 less than the other bids. Their proposal was enclosed, together with additional specification sheets on the various materials going into their home. The letter also informed her that an A-7 priority rating had been granted by the War Production Board.

General Contractors' proposal was in the form of an imposing document headed "PROPOSAL TO MR. AND MRS. NORTON FOR YOUR NEW HOME," and contained a letter from the contractors giving the complete price for the house, and referring her to the typed-up copy of the enclosed *Visagraph*, which would serve as complete specifications. As Mary glanced through the various papers, she had a comfortable feeling—everything seemed so efficient and understandable; so many of the details and technicalities involved in building a home had been taken care of for them.

While she was reading some of the detailed specification sheets which were included in the "Proposal," the phone rang. It was Albright of the First Federal. He told her he had just received a firm commitment from the FHA for her house, and explained that this meant that Federal Housing would insure the Norton mortgage upon completion of construction. This meant too, that FHA inspectors would examine the work at several points during its progress, to see that the specifications were being followed.

"Well," said Mary, "I just received a letter from Mr. Atkins, enclosing a bid from General Contractors. Are they good builders?"

"First rate, Mrs. Norton," Albright told her. "If you want to check on them, though, why don't you call the FHA office? Ask for the architectural supervisor. He'll tell you if your firm is acceptable."

So Mary called the FHA, and was told that General Contractors was a highly reputable firm and that she could set her mind at ease about the quality of work going into her house, if they were going to do the building.

That satisfied Mary; and after talking over the situation with George that evening, she told Atkins at Steeltown Lumber to go ahead. "Now is there anything else we should do?" she asked. Atkins laughed. "Just send in General's offer, with your signatures at the bottom where there are places for them, and send it back to us. Then, tomorrow, maybe you'll want to come out to your lot and watch the house staked out."

The next day, during his lunch hour, George Norton drove Mary out to the lot, where they met Atkins and the surveyor. And now at last, when they saw the stakes and string that outlined their new home for them, both George and Mary felt that they could almost see the actual house itself, complete with Venetian blinds at the windows.

THE next three months were a whirl of activity for Mary—caring for the family, keeping the little apartment habitable, doing many hours of Red Cross work, and spending a good deal of time at the lot, watching their new house go up by leaps and bounds.

First the excavation for the foundation was dug—a noisy steamshovel crawled in on their lot and in only a few hours gouged out a big hole inside the stakes which marked the corners of the house. Shallow at one end, it was a good eight feet deep at the other, where there was to be a half basement.

Then came the masons, with their cinder blocks, their mortar, and their bricks for the solid bearings under the girder of the house. In a day or so, the walls of the basement and the foundation were up. The trenches for the water and sewer lines were dug by an

enormous trenching machine, while the carpenters began their work erecting the framework of the house. From then on it was a busy pageant of carpenters hurrying to roof in the house so that work could go on inside regardless of the weather; of plumbers "roughing in" their pipes; of electricians installing the rough electric cables, and tinsmiths cutting and fitting the ducts for the warm-air heating system the Nortons had chosen; and finally of insulation men putting the rockwool insulating batts into the walls and attic of the little house.

In six weeks, the house was ready for "roughing in inspection" and for interior finish. One day a varied crew of inspectors arrived at the site—building, plumbing, electrical, heating and FHA inspectors, all going over the house and examining its construction and workmanship; and next, as approvals were issued by the respective Federal and municipal departments interested, the inside finish walls began to go up.

At first the Nortons had planned on plaster for their walls. But when they were told it would take at least two weeks for the plaster to dry, they had picked out one of the accepted "dry wall" finishes. A special crew of workmen came on the job and began nailing the handsome wallboards up on studs; and after them came the men to tile the bathroom, the floor crew to install the oak flooring, the linoleum subcontractor to lay the linoleum in the kitchen, and finally the finish carpenters to build in the trim.

And soon—sooner than the Nortons had expected—the house was ready for the painters, the paper hangers, and the equipment installers. The stove, the hot water heater, the modern icebox, and all the other equipment was put into place; a couple of energetic laborers with soap and clean cloths and razor blade scrapers went through the house cleaning the bathroom, the windows and the kitchen; men from the landscape subcontractor brought in a load of sod and another load of flagstone for the front walk and turned the muddy chaos of their yard into a pleasant neat lawn, and only a day or so later, the head of General Contractors phoned to tell them that the house was all finished and ready for them to move in.

A few more papers had to be signed; the check for the settlement fees written; arrangements with a moving company made—and at last, less than five months from the day George and Mary had first called at the Steeltown Lumber Company, the Nortons moved in their new home.

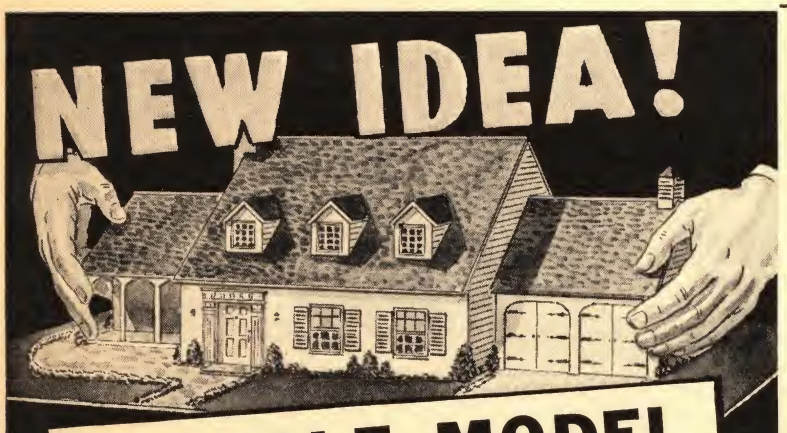
A WEEK later, when they were comfortably settled, they held a house warming. Many new friends, whom Mary had made at her Red Cross station and in the neighborhood while the house was being built, came; and several of George's co-workers at the factory, too. Everyone went through the house from basement to unfinished attic; had their comments to make and questions to ask; and filled themselves up on the snacks Mary had prepared. Tom and Lucy had already started planting their part of the garden.

George and Mary were almost as thrilled over the chance for a garden and terrace as they were over the house.

Finally everyone was tired of walking about, examining all the new things; and George, finding them all settled in the living room, raised one hand for silence.

"Friends," he said, "I would like to propose a toast. I'm afraid it'll be a long one—but here goes.

"Here's to the lumber dealers, the bankers, the builders and the realtors who helped us get started with our new house! Here's to the fine workmen—carpenters, masons, plumbers, painters, electricians, laborers and all the others—who turned our dream into reality! And here's to the United States Government—our government!—which has seen to it that building this house even under today's wartime conditions was made possible! Which realizes that homes are just as important to the war effort as airplanes and battleships! Our government—which knows that a victory over the enemy won at the expense of our own democracy, our own way of life, would be an empty victory indeed! A toast, friends, to America and to America's home builders!"



Yes, due to the demand for this clever kit, you can build a real-looking model of your own future home, just as you plan it to be—*at reduced cost!* One kit contains material for ANY traditional-designed house. Contains simulations of doors, windows, trim . . . stone, brick, whitewashed brick, clapboard and shingle wall facings . . . shrubbery, lawn, roofs. Full instructions. Sturdy cardboard construction. Endorsed by architects. Send the coupon below today while it is in your mind.

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Enclosed is $..... Please send me ..... model kit(s).

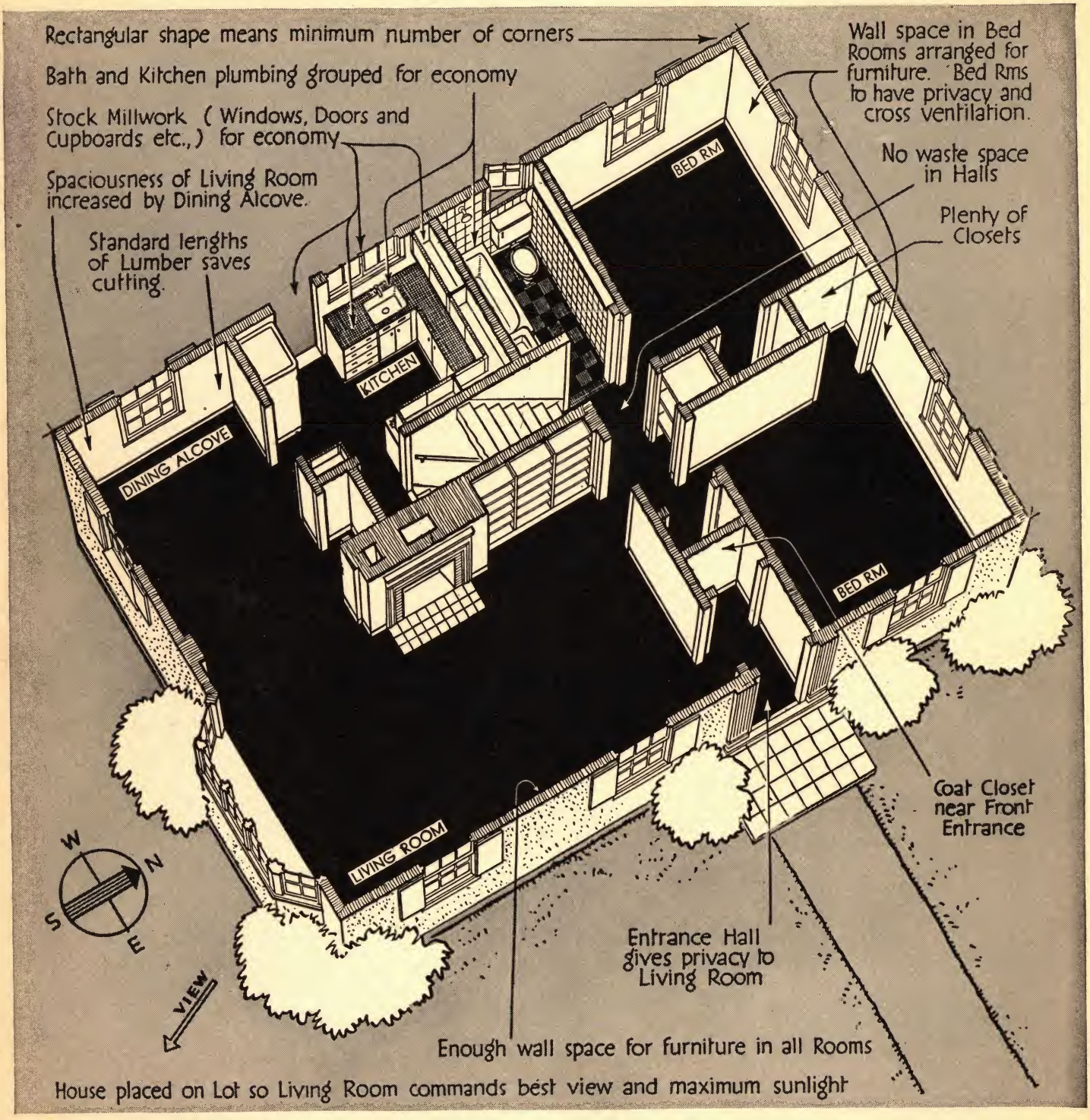
Name ..... Address.....

City ..... State.....

DESIGN

The need for efficient planning of homes is greater today than ever before. The designs in this section ingeniously demonstrate wasteless planning yet feature convenience and livability . . . at low cost.

Points TO WATCH ON YOUR NEW HOME DESIGN



The above principles apply to any floor plan. Equally important is the exterior looks of your future home. The designs on the following pages have been carefully selected to incorporate good principles in architectural design with comfort and convenience giving you the maximum house for the dollar. You will want your home designed to meet your needs, and the best way to do this is to build an actual scale model. This Bureau offers a special value—a complete Model Home Kit. (See p. 10 for details.) With this kit you can build a model of any of the 46 designs shown in this section. The kit contains all types of exteriors, doors, windows, shrubbery, lawn and roof. It will be most helpful in choosing specifications and seeing your home complete in miniature form before you begin building. You will also want the new Visagraph which will make it easy for you to write specifications with the assurance that you will get what you want. (See p. 34 for details.)

National Homes Foundation

REVISED STANDARD HOUSE PLANS

House designs numbered 1 through 15 are sponsored by the National Homes Foundation, a non-profit co-operation of trade associations and companies interested in home building. The broad purposes of the Foundation are to promote home building and to co-operate with the United States Government agency concerned with building and financing homes in an effort to give better value.

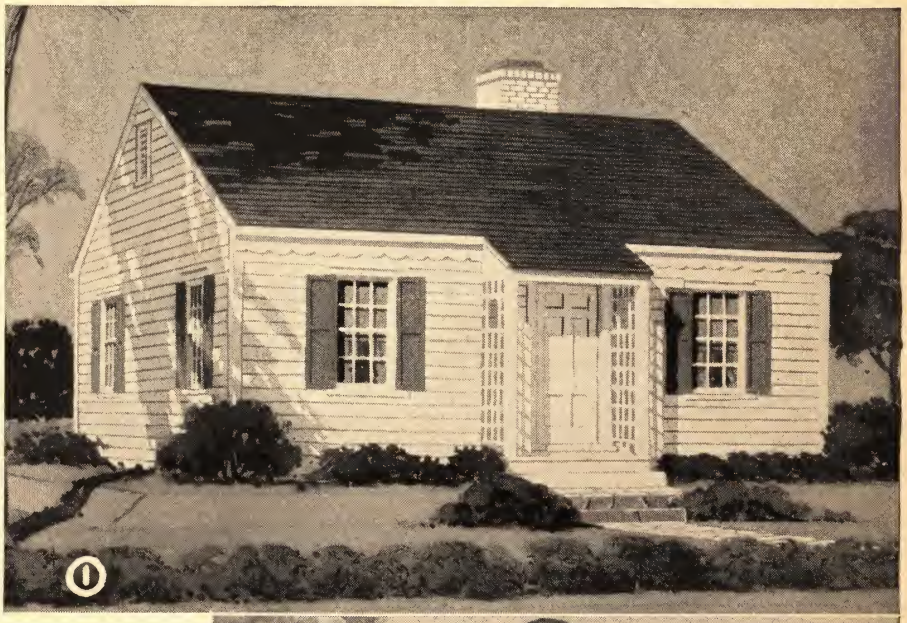
The plans have been revised to conserve critical materials. The original plans were published in Sixth Edition of **Small Homes Guide**

Any of the five exteriors fit this floor plan.

The apparent shape of a rectangular house may be varied with gables, dormers or extension wings.

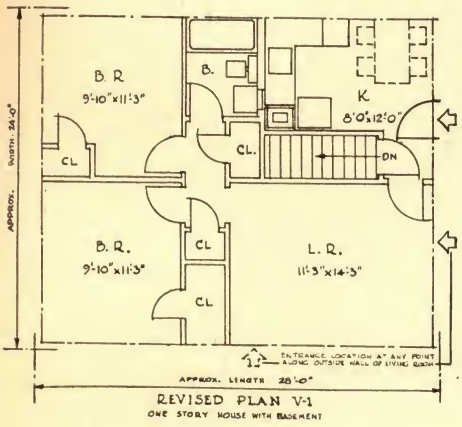
(Continued on Page 15)

See your lumber dealer or use coupon on Page 15.

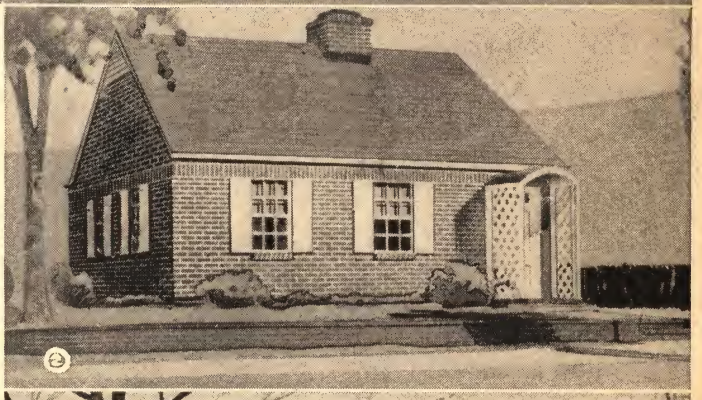


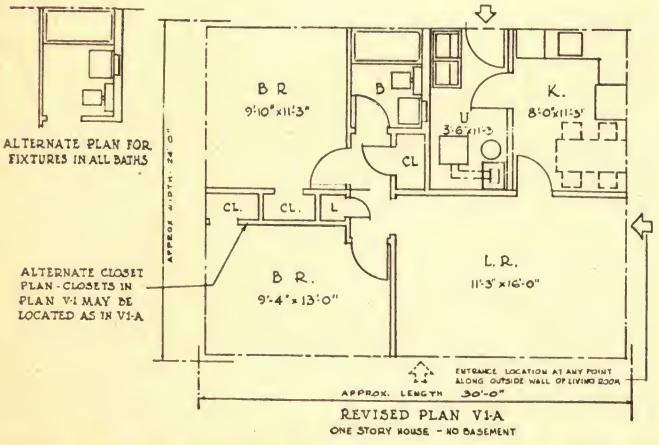
"FOUNDATION" PLAN No. V-1

1. Lumber
2. Brick
3. Plywood
4. Asbestos Cement
5. Red Cedar Shingle

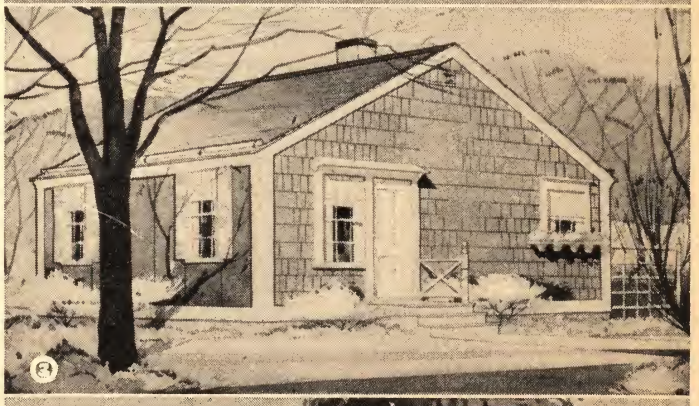


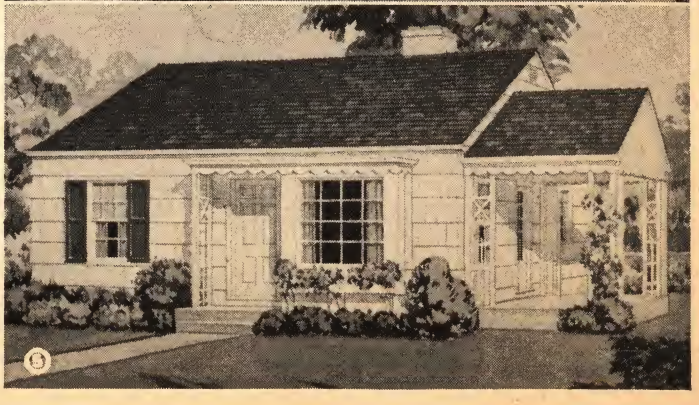
REVISED PLAN V-1
ONE STORY HOUSE WITH BASEMENT

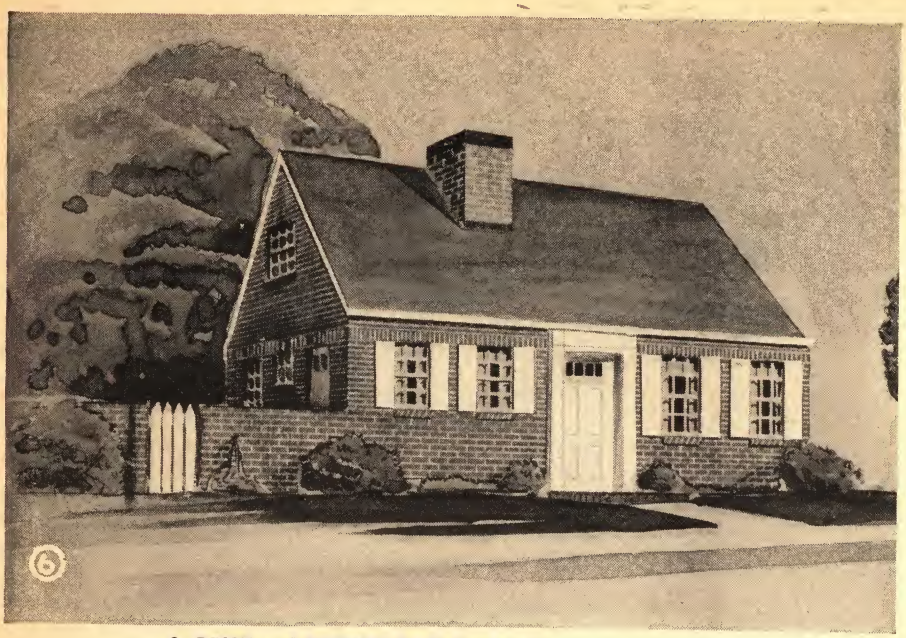




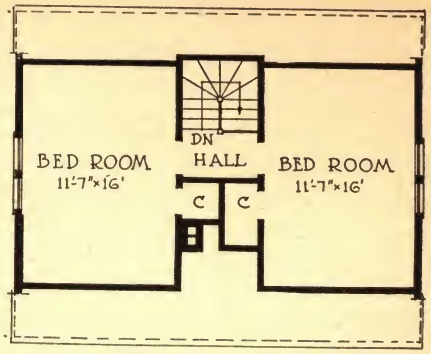
REVISED PLAN V1-A
ONE STORY HOUSE - NO BASEMENT



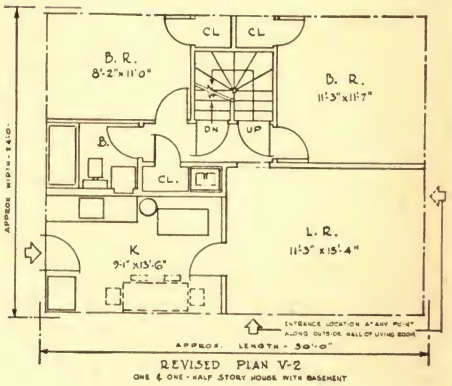




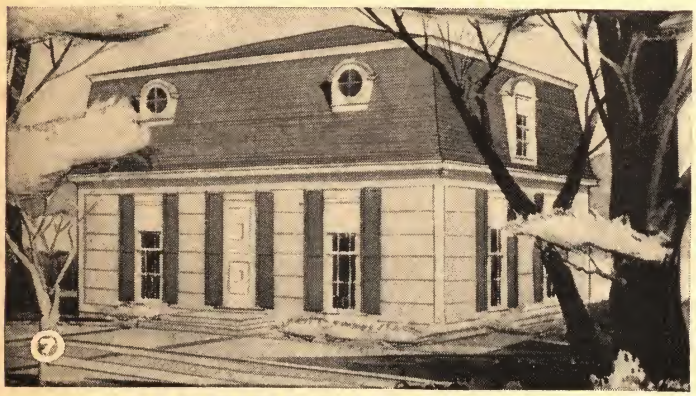
6. BRICK and BURNED CLAY Products



SECOND FLOOR PLAN

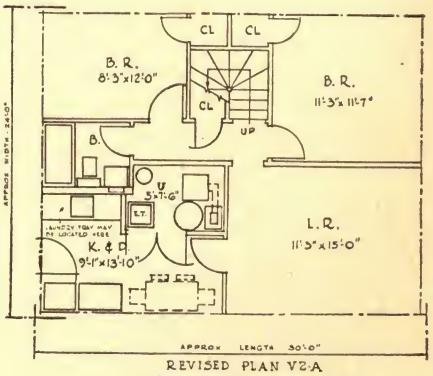


REVISED PLAN V-2
ONE & ONE-HALF STORY HOUSE WITH BASEMENT



7. PLYWOOD Walls, Floors and Interiors

"FOUNDATION" PLAN No. V-2

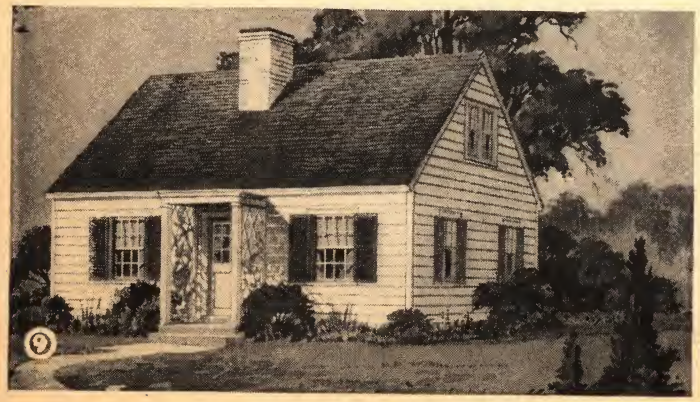


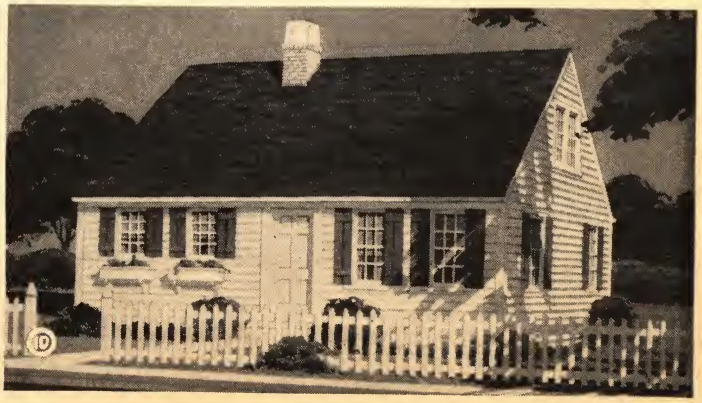
REVISED PLAN V2-A
ONE & ONE HALF STORY HOUSE - NO BASEMENT

8. RED CEDAR SHINGLES ("Certigrade")

FOR INFORMATION on Blueprints, Working Drawings and Specifications, see your lumber dealer or **use coupon on Page 15.**

9. ASBESTOS CEMENT Products
10. Lumber and WOOD Products





The following trade associations have interpreted the use of their various products as applied to the basic floor plans on pages 13, 14 and 15:

Asbestos Cement Roofs and Walls
Asbestos Cement Assn., Philadelphia, Pa.

Brick and Burned Clay Products
Structural Clay Products Inst., Washington, D. C.

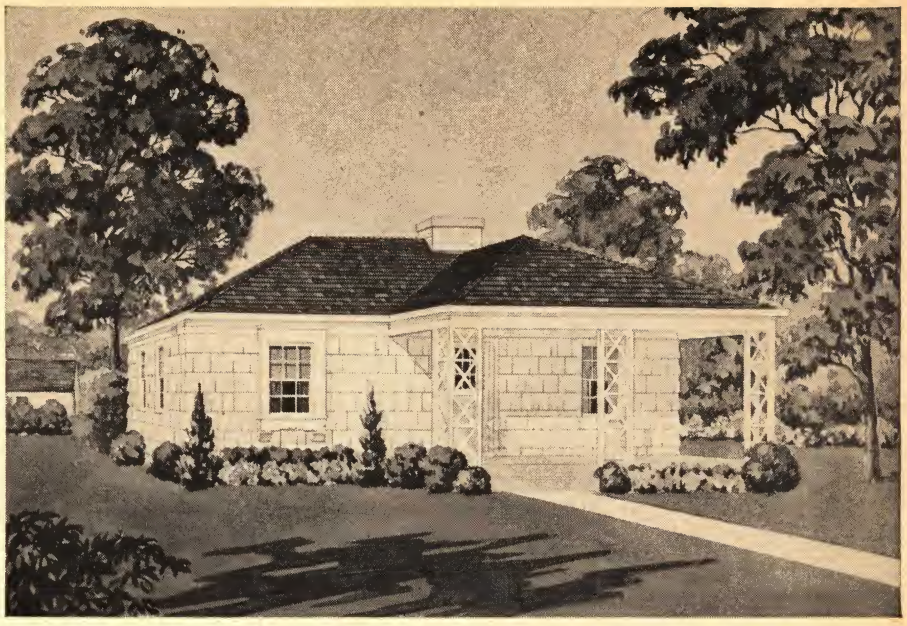
Lumber and Wood Products Throughout
National Lumber Mfrs. Assn., Washington, D. C.

Plywood Walls, Floors and Interiors
Douglas Fir Plywood Assn., Tacoma, Wash.

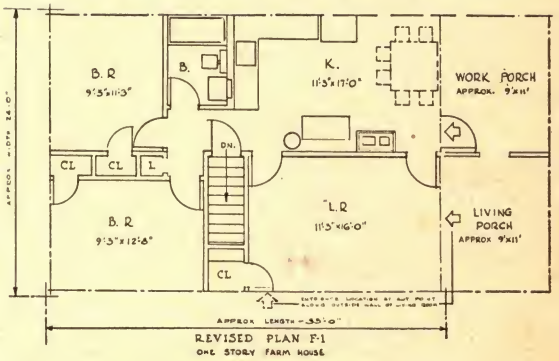
Red Cedar Shingles ("Certigrade") Walls and Roofs
Red Cedar Shingle Bureau, Seattle, Wash.

FOR INFORMATION on Blueprints, Working Drawings and Specifications, see your lumber dealer or use coupon below.

"FOUNDATION" PLAN No. F-1



11. RED CEDAR SHINGLES ("Certigrade")



12. Lumber and WOOD Products

13. BRICK and BURNED CLAY Products

15. ASBESTOS CEMENT Products

Small Homes Guide, 572 Madison Avenue, New York

Please send me full information, including where and how to get working drawings and specifications, on the houses checked below:

[1] [2] [3] [4] [5] [6]
[7] [8] [9] [10] [11] [12]
[13] [14] [15] **Victory Home** [ ]

Name.....

Address.....

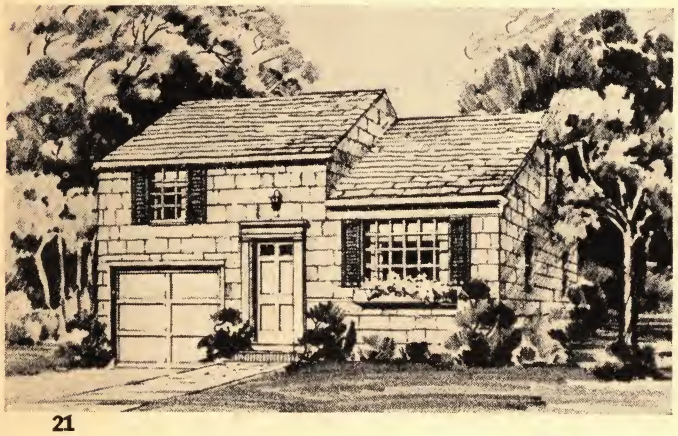
City.....State.....

Nine ADDITIONAL *Victory Home* ELEVATIONS

16 17 18

19

20



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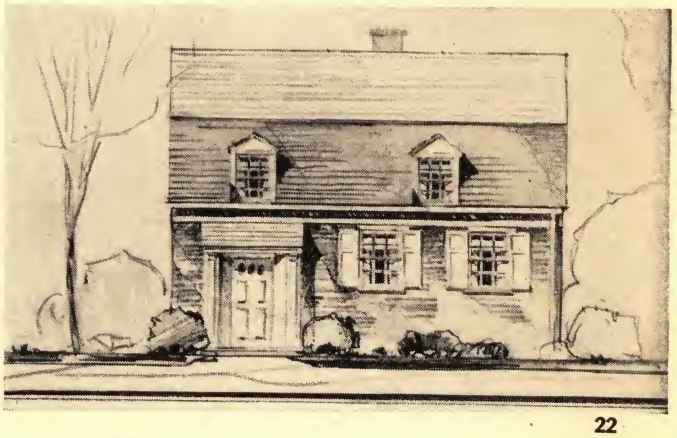

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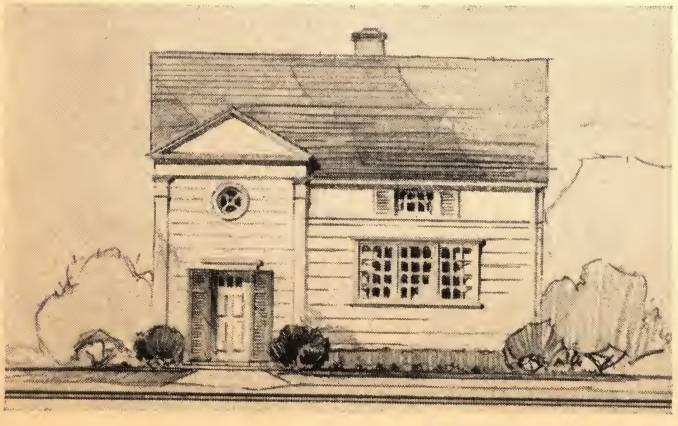

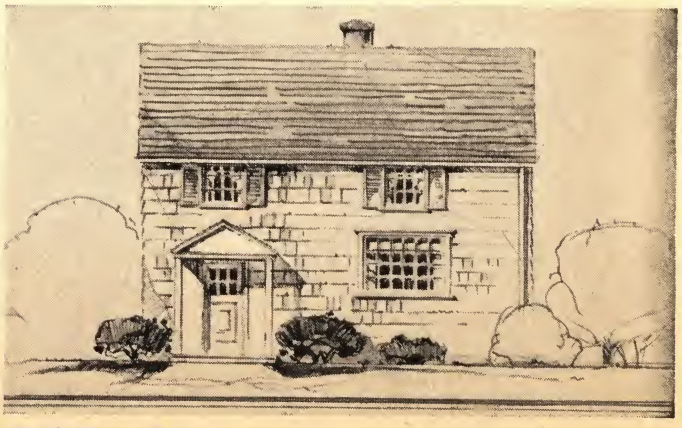

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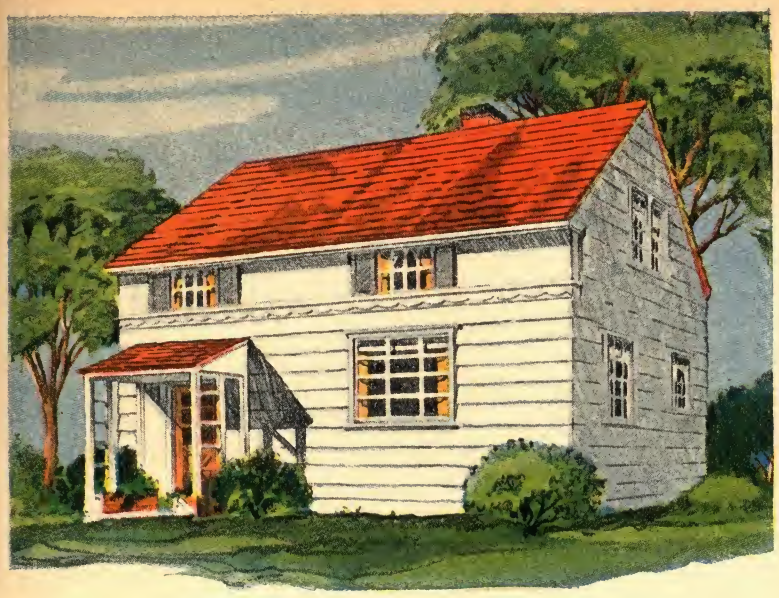
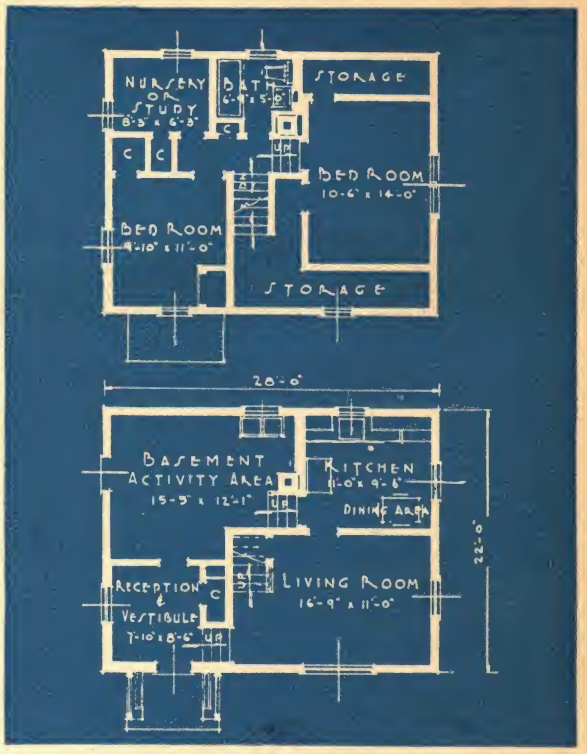
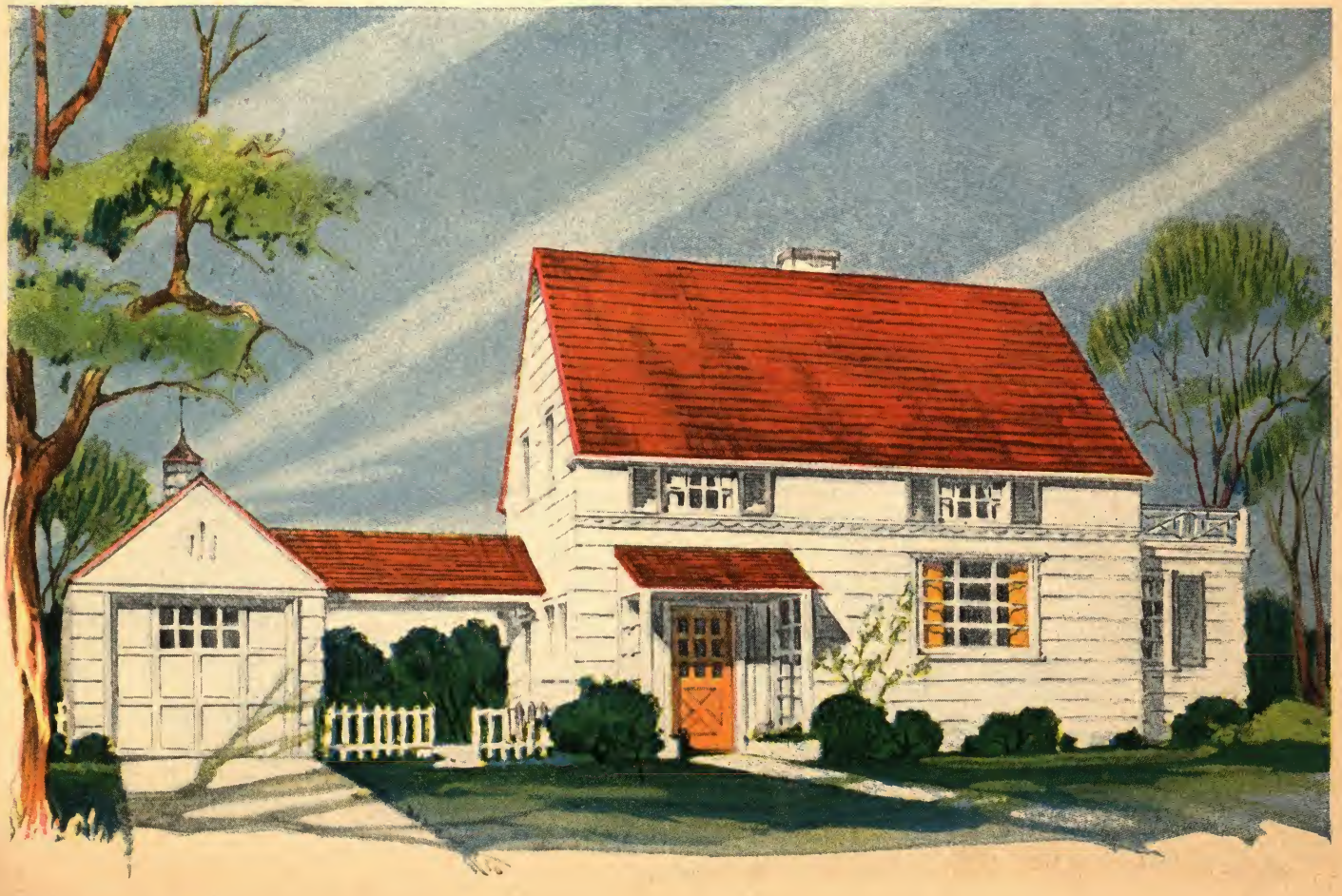


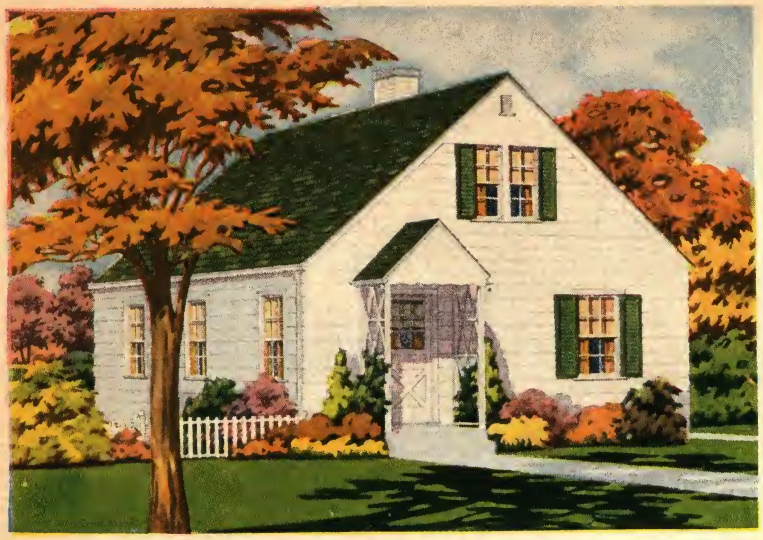
25. *THE VICTORY HOME*

Thirty-six different exterior designs have been created for this basic "tri-level" plan. Its concept is right up to the minute as it eliminates the use of much critical material. The design at the left can be built in most sections for about $4,500.



26. Design below illustrates future expansion possibilities. A dining room is added with entrances leading from the living room and the kitchen. A breezeway and garage on the other side give perfect balance to this house that has grown up. This suggested future design is for use on a wide lot. The same rooms can be added to the house at the top of the page to be used on a narrow lot. Complete working drawings and specifications can be had from your local lumber dealer, or use coupon on Page 15.





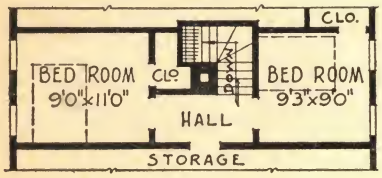
DESIGN No. 27

The Tarleton

Essential requirements for a home today are efficiency of layout, compactness for economy, ample room for comfort, and good design. In the basic floor plan and in the six colorful and attractive exteriors shown on these two pages, you will find all these qualifications. While this plan has only four rooms, five room efficiency is apparent as generous dining space is provided in the kitchen. Other features of these houses are access to attic space and future second floor room possibilities, the adaptation of the plan to either a wide or a narrow lot, opportunity for porch and garage additions. Any of these houses

Designs 27, 28 and 29 are for narrow Lots; Main Building width, 24 Feet.

The House designs on this and the following pages have been created by architects of the National Plan Service, Chicago, Ill. Complete blueprint plans are available through many local lumber and building material dealers almost everywhere.



☆ ☆ ☆

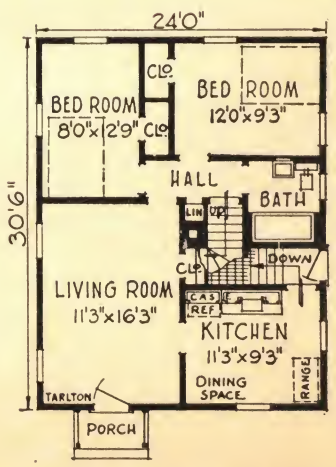
ATTIC SPACE

Convenient attic stair is provided and ample attic space is available for two cozy rooms, when needs of the growing family make this addition an essential investment. See floor plan below.

DESIGN No. 28

DESIGN No. 29

© National Plan Service.



FLOOR PLAN FOR HOME SET NARROW WAY ON LOT.

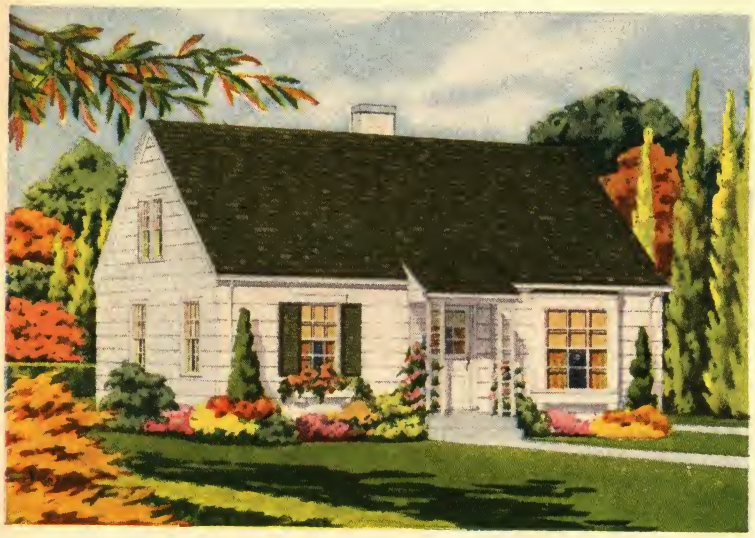
SIX EXTERIOR DESIGNS FOR THE SAME BASIC FLOOR PLAN

can have wood siding, shingle or brick exteriors.

The three exteriors on page 18 are for a narrow lot. The width of the building is 24 feet. The other three exteriors are for a wider lot and the width of the main building is 30½ feet. House Design No. 30 has a breezeway and a garage added. This can be done at a later date if the person so desires to have these features.

This is the time to plan any future additions to your house. In other words, build as much or as little of your ideal home at a time as you like, but know before you start what you want when it is finished, to insure your satisfaction.

DESIGN No. 30



DESIGN No. 31

GARAGE FACILITIES

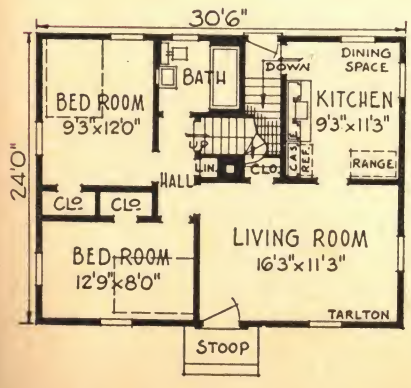
Design No. 30 illustrates how garage may be connected to any of these homes by a breezeway or entry. Floor plans shown below include this additional space for narrow or wide homes.

BREEZEWAY AND GARAGE...2,650 Cu. Ft.

☆ ☆ ☆

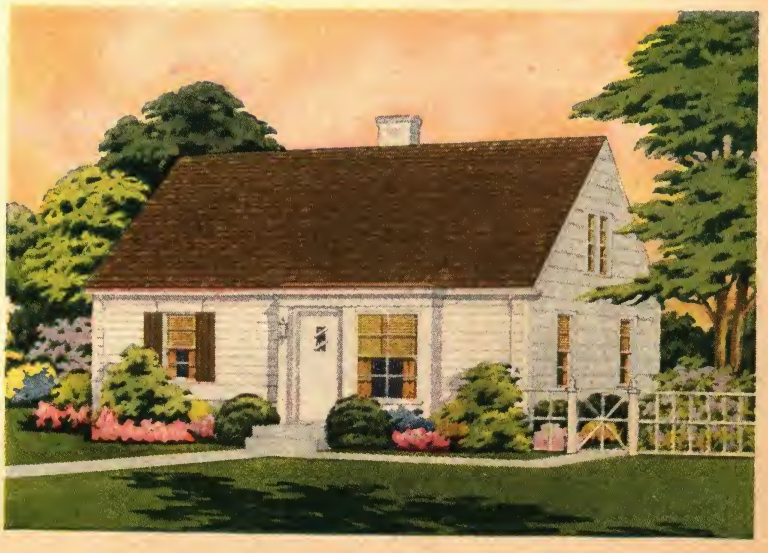
Designs 30, 31 and 32 are for wide Lots; Main Building width, 30½ Feet.

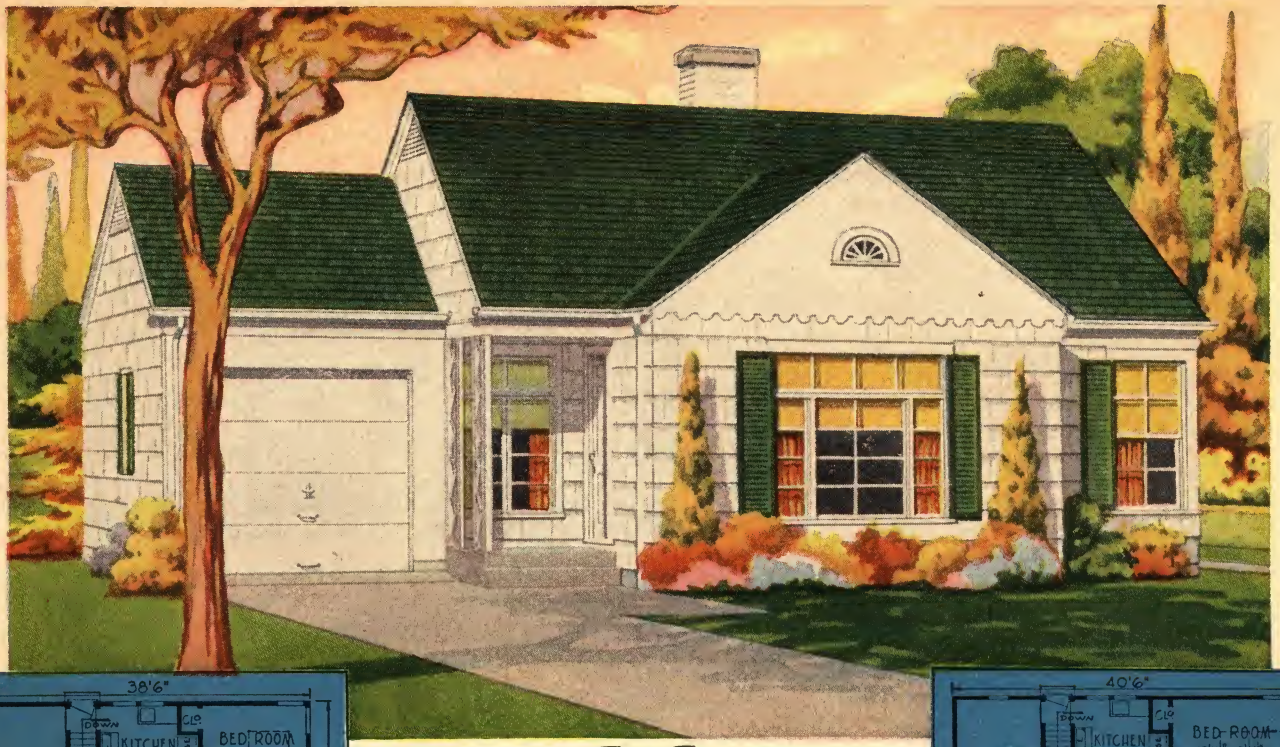
AVERAGE CUBIC CONTENTS
15,400 Cu. Ft.

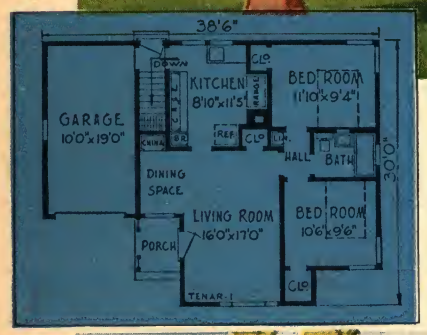


FLOOR PLAN FOR HOME SET WIDE WAY ON LOT.

DESIGN No. 32



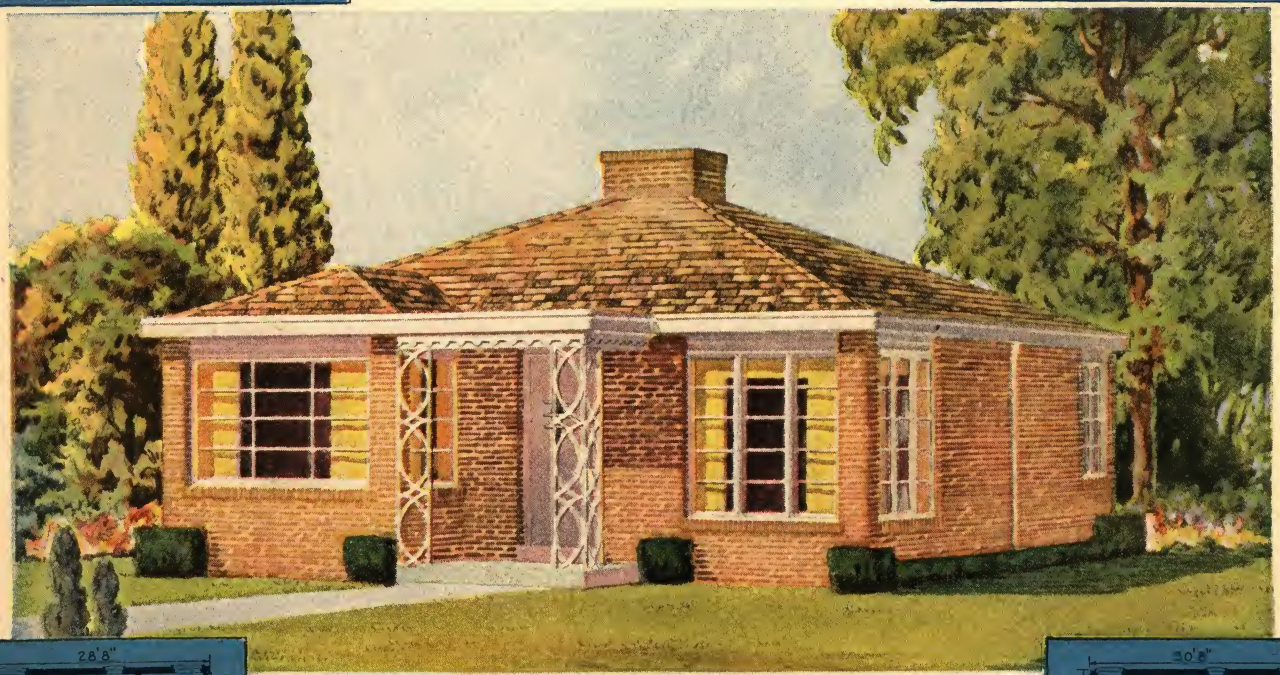


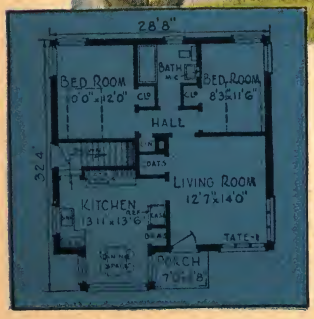


33. The Tenar

An attractive feature of this house is the large window in the living room. The plan is simple and straightforward. The garage entrance in front makes it possible for use on an average suburban lot.

Plan 1....17,060 Cu. Ft. Plan 2....20,140 Cu. Ft.



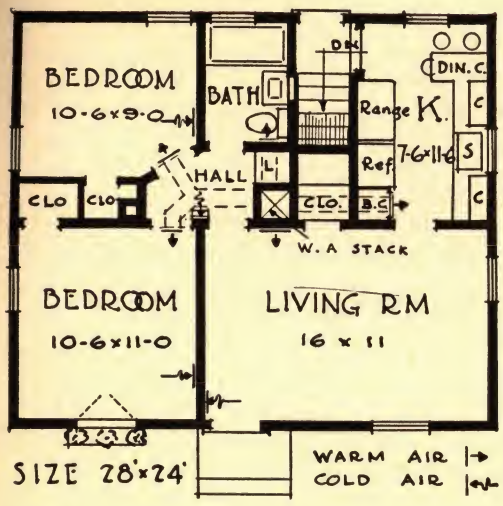


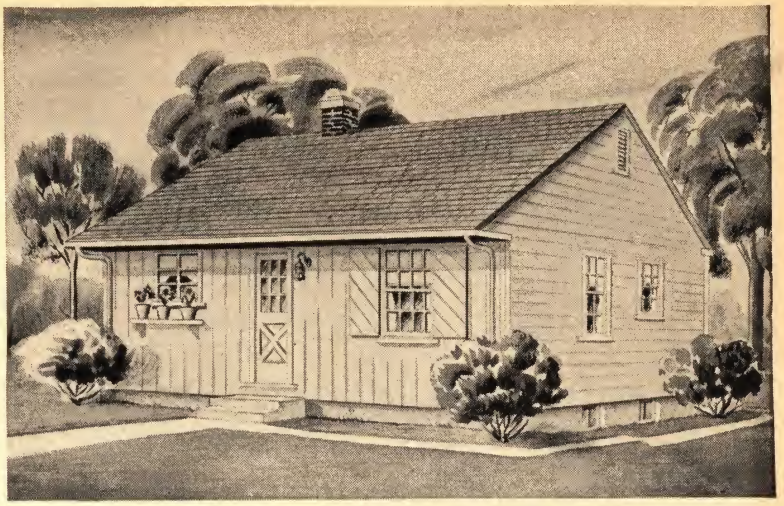
34. The Tate

This modern style home with colorful face brick exterior walls leaves nothing to be desired in interior arrangement. It offers construction costs of four rooms but gives five room efficiency. Note the dining alcove off from the kitchen.

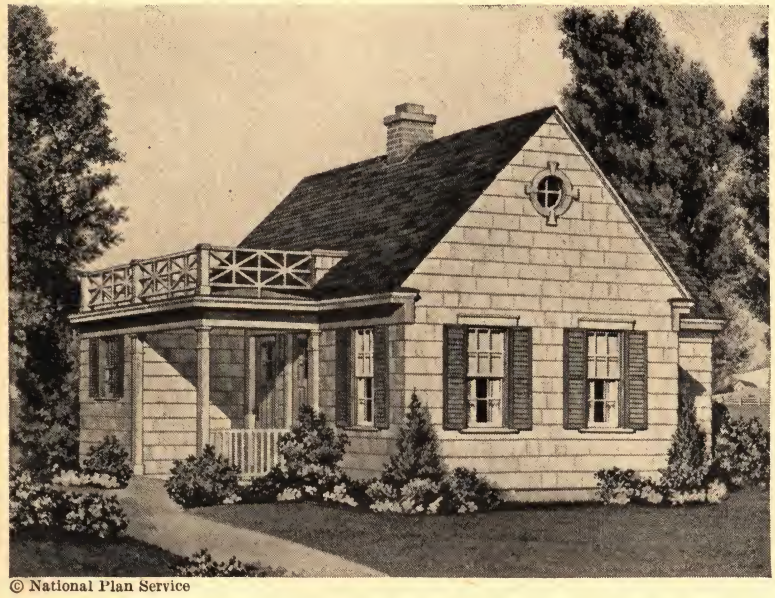
Plan 1.....15,200 Cu. Ft. Plan 2.....18,250 Cu. Ft.

Farm Homes

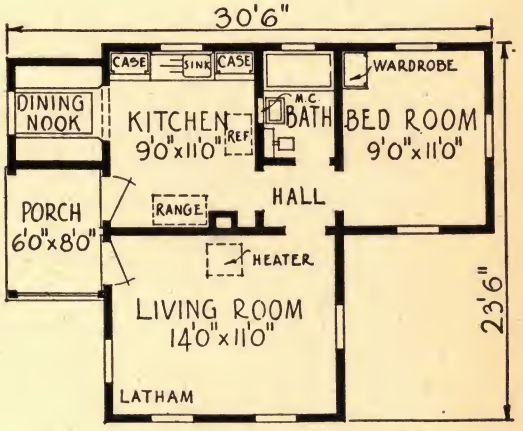




35. When you add modern conveniences to the farm, you have "life at its best." This farm plan was developed by the Northwestern Lumbermens Association, 710 Foshay Tower, Minneapolis, Minn. Information about complete working drawings can be obtained from them.

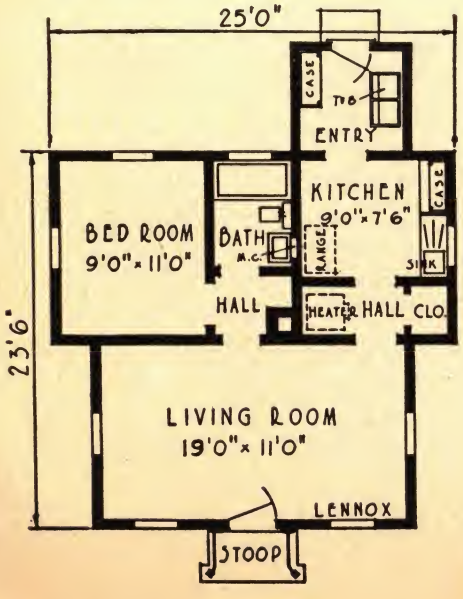


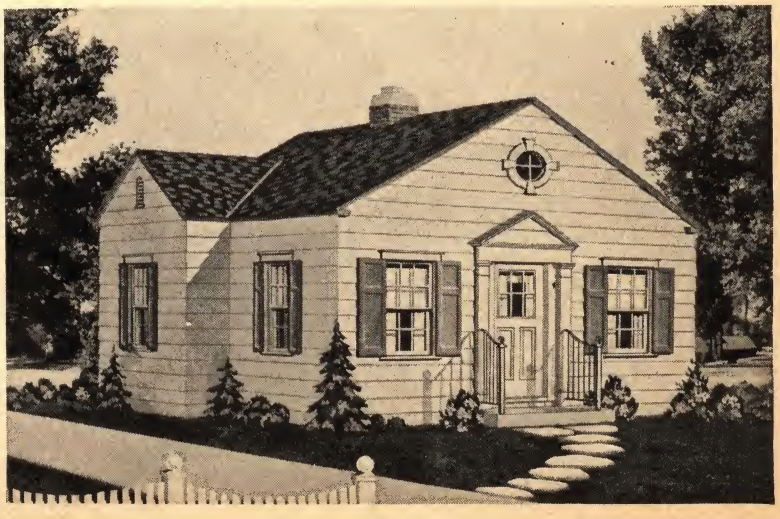
© National Plan Service



36. The Latham. This house has a large kitchen so necessary in farm living. The living room and bedroom are also comfortably sized. The dining alcove is convenient for canning work.

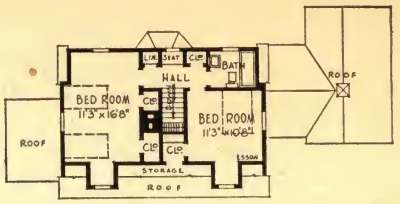
37. The Lennox. This is a well-designed small homestead. The living room is large and has three exposures. The back entry can be used as a laundry and storage space for various farm utensils.

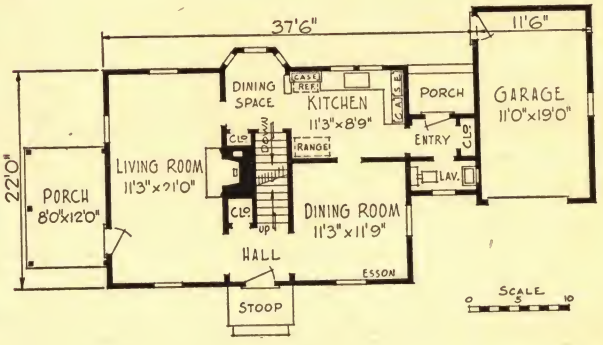




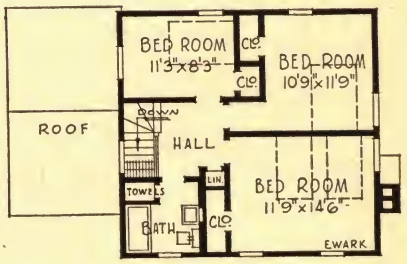
CUBAGE:

House	16,980 Cu. Ft.
Garage	2,400 Cu. Ft.
Porch	480 Cu. Ft.
Total	19,860 Cu. Ft.





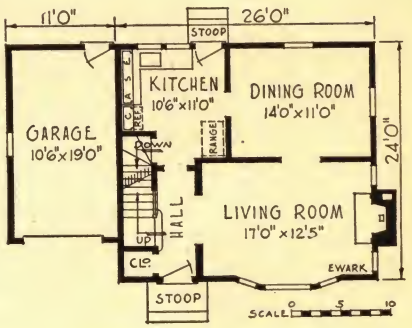
38. The Esson An attractive story-and-a-half home gives the comfortable feeling of unusual spaciousness. It requires a wide lot, but includes all modern features.



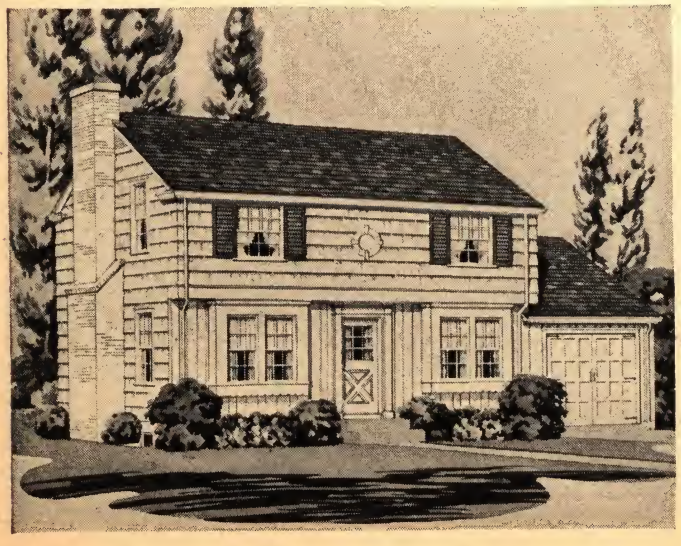
39. The Ewark This two-story house has large rooms. All three bedrooms have cross ventilation. The living room has a fireplace and a bay window making it easy to decorate. Note the large attached garage.

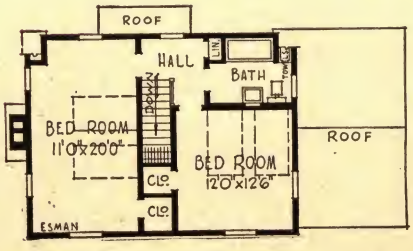
CUBAGE:

House	16,820 Cu. Ft.
Garage	2,750 Cu. Ft.
Total	19,570 Cu. Ft.



40. The Esman Ingenuity in design here has produced an attractive, different-looking, low-cost home. The master bedroom, facing front, is unusually large.





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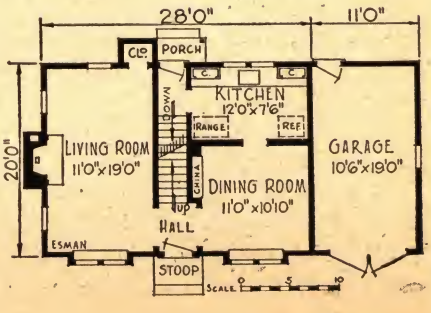
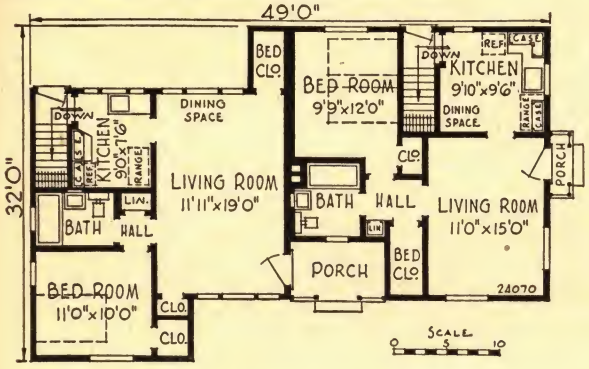


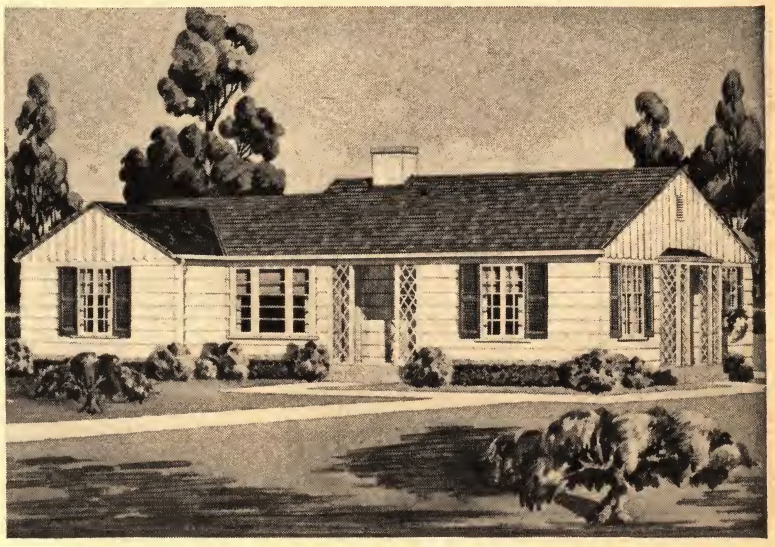
CUBAGE:

House	14,090 Cu. Ft.
Garage	2,420 Cu. Ft.
Total	16,510 Cu. Ft.

Two-Family DWELLINGS

A home providing accommodations for two families is a desirable investment. One apartment can be maintained by the owner, while the other is available for rental. These attractive designs show that two-family dwellings can have the appearance of a single home. They need no longer have that renovated duplex look.





41. Mark 24070 This plan, which contains two complete three-room units and closets for disappearing beds, presents a good-looking exterior, home-like and well-balanced. Ideal for a corner lot, it is, however, equally adaptable to an inside lot, or with limited width it may be used the narrow way.

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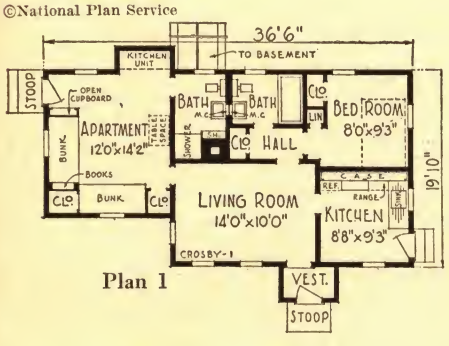
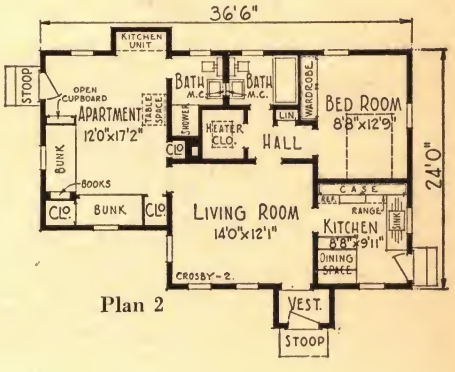


Plan 1

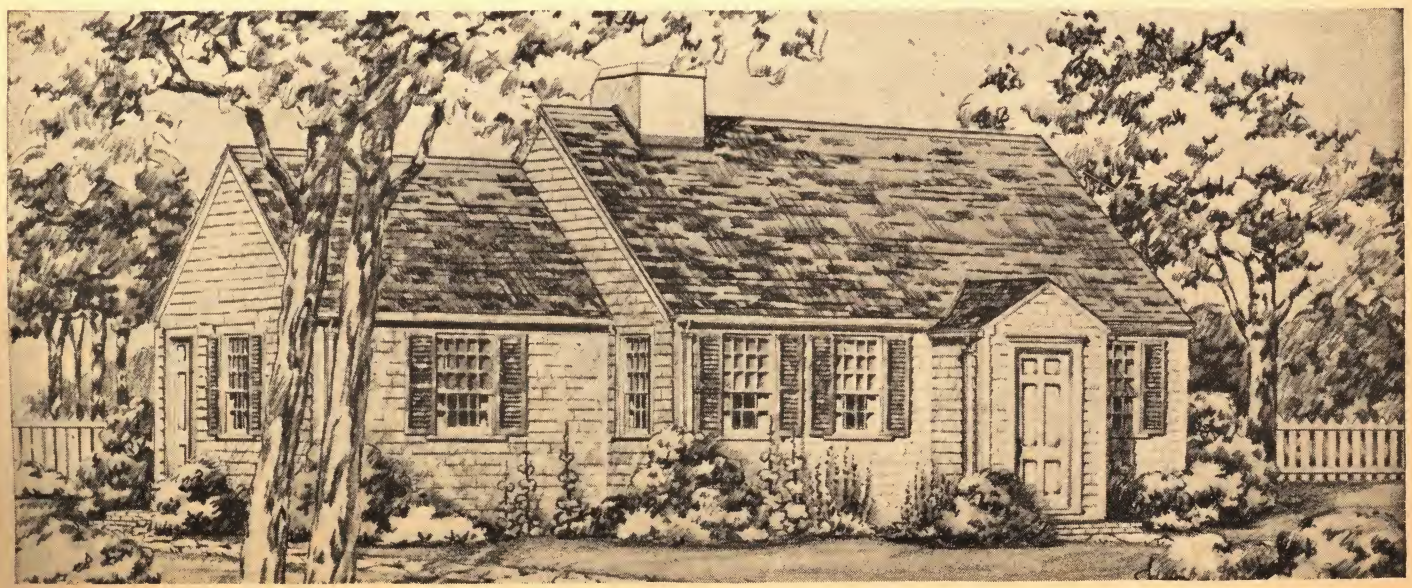
42. Cap'n Crosby House

An adaptation of early Cape Cod architecture, this house incorporates the simplicity and sturdiness which distinguishes the building of the early settlers. A complete three-room unit is included in the plan, plus an apartment, with kitchen and bathroom facilities and a separate entrance.

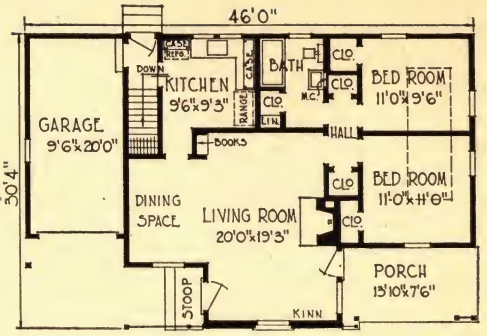
See your Local Lumber Dealer for working drawings of these Houses.

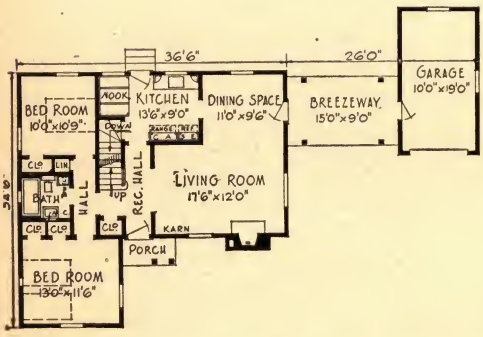


Plan 2



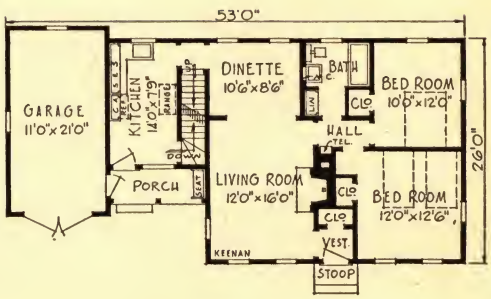
43. The Kinn



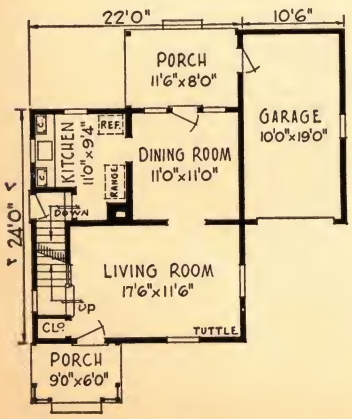


44. The Karn

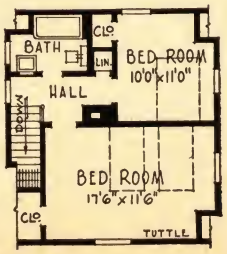
45. The Keenan



THE problem of a garage has been solved in a number of different ways. The *Kinn* garage is built with the house as it is under a part of the main roof. The *Karn* has a breezeway to connect an isolated garage. The *Keenan* has a covered porch in front of the kitchen connecting the house and garage. The garage on the *Tuttle* can be added later if desired. Note how the garage doors and hardware add to the beauty and interest of these houses.



46. The Tuttle



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FINANCING

Planning to build, modernize, or recondition your home? Here are presented the primary steps which will show you where to go and how to get financing.

The Case FOR HOME OWNERSHIP . . .

IT has been many years since someone invented the slogan: "Own Your Own Home" . . . but, like a great many old-time truths, no one has ever been able to improve either the sentiment or the business advice in the phrase.

Did you ever enumerate the many forces which the ownership or the purchase of a new home set into motion? . . . Just what are the direct benefits to you when the family acquires its own place to live? . . . Here are a few advantages of home ownership:

1. Financial Independence — More people have started toward financial independence through home ownership than in any other way.

2. Security—In times of stress the home is always something on which to fall back.

3. Cash Equity—A home is much like a savings account on which you draw interest as you invest.

4. Credit—Home ownership gives financial and credit rating in the business world.

5. Social Background—The children of home-owning parents have a greater stake in the community.

6. Environment for Children—Your sons and daughters have the privilege of playing and spending recreation periods within the confines of land owned by the family and in which they have a personal interest.

7. Development of Responsibility — The home owner always feels a greater sense of responsibility for the preservation of his property; and, in any neighborhood where home ownership predominates, building values and the appearance of the community are always much better than in a rental area.

8. Expression of Individuality—The opportunity to express on the interior and exterior of your home those personal ideas of yours which individualize your property according to your own taste is worth much in personal contentment and satisfaction.

9. Permanence of Environment—Old friends are always best, and it is pretty difficult to develop life-long attachments, which make living more pleasant, when we move from rented house to rented house.

10. Character Development—The responsibilities of home ownership have contributed greatly to the development of good business judgment and trading acumen on the part of many home owners.

11. Independence—It is certainly a pleasure for the home owner to know that no one can raise his rent, order him to move, tell him how many pets he can have, restrict the size of his family, or comment in any way upon the development of the home.

12. Savings Habit—Most of our actions being habitual, it is easy for the home owner who has completed the purchase of his dwelling, to continue systematic monthly saving.

13. Peace of Mind—We always live better when we know that, come what may, the paid-for house means always a roof over the family.

Whether you own a home or rent one, the same items have to be paid: interest on the money invested, taxes, insurance, and up-keep. When you rent a house you must pay those four items plus the fifth—profit to the landlord.

Thrift Paves the Way TO SECURITY

A savings and loan association has two purposes. One is to facilitate home ownership for American families. The other is to encourage thrift by providing a safe place for the investment of both large and small sums. By working together through these associations, individuals help themselves to build up their own resources and help their neighbors to build or buy homes.

INSTEAD of almost total emphasis being placed on new construction as it generally has been during the past several years with increasingly attractive terms to home seekers, better design and improved materials, today's opportunities in the residential field can be stressed only within certain definite limits because of the war.

These opportunities fall roughly into the following categories: (1) New houses under $6,000—construction plus land—in designated defense areas. (2) Conversion and remodeling of existing structures to provide additional accommodations for defense workers in critical areas. (3) Modernization of existing structures—within and without defense areas. (Within defense areas, necessary critical materials may be had; without, many substitute materials are being used.) (4) New Houses —outside of defense areas—which may be constructed with a view to adding certain essentials such as a heating plant and additional electrical facilities at a later date when they again become available. (5) Refinancing of homes now being paid out under old-style "lump mortgage plan", in order to secure more favorable terms such as are provided under the popular savings and loan, direct-reduction plan.

In any case, the neighborhood savings and loan association is geared to the times and is ready to assist borrowers in their housing problems, whether for new construction, reconditioning or refinancing.

New Houses

New localities almost daily are being designated as "defense areas", and it is in these places that the prospective home builder—if his plans are in keeping with the established $6,000 maximum-cost limit for a single family dwelling—can proceed practically as he would have before the emergency. "Priorities" on such critical materials as will be used in construction must be considered and obtained in advance, of course. But once priorities have been secured, he can sketch his plans, discuss his financing, hire an architect if he wishes and begin his home with the assurance that it will be finished. His loan terms will be just as favorable and in almost every respect he can do a perfectly "normal" job of building.

The Advantages of Building Today

The "direct-reduction" loan plan through which you can make a small down payment and pay the balance in monthly installments extending over 15 to 25 years, is certainly worthwhile. This instead of the old-style "lump" mortgage which had to be paid off or renewed, with heavy fees, in three to five years.

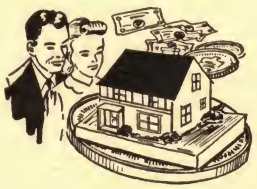
The lowest interest rates in the history of home mortgages.

Freedom from the necessity of a second or third mortgage with exorbitant interest rates.

Protective services which assure a better quality home than ever before.

Home Building Service

Many associations maintain "home building service" departments which can make the various problems of home-building comparatively simple.



Others have an arrangement with a local architect whereby a limited technical service may be had for a nominal fee, usually included in and paid for as part of the construction loan. Such service as a rule includes advices in design and planning for family living requirements, the drawing up of construction specifications and contracts, and limited supervision while the house goes up.

Conversion

In many defense areas, Home Registration Offices have been established to which home owners may apply for information and free architectural services—provided the Home Owners' Loan Corporation fee architects and technicians—in connection with remodeling their houses to provide additional accommodations for defense workers. These services are limited to technical appraisal of the possibilities of converting the structure and an estimate of costs involved. If you then wish working drawings and supervision of the work, arrangements can be made for their provision at nominal cost. Savings and loan associations, again, stand ready to finance such projects on a long-term, amortized basis and welcome opportunities to discuss the details with you.

Some instances have been reported of home-owners who converted their large home into two or more apartments for the purpose of producing income, and proceeded then to build a new home for themselves. The result is that the old home is producing a good income and the owner is situated in a new home of his own. All this is possible in defense area.

Remodeling

In the case of the home owner who wishes to remodel his home but it is not in a designated defense area, much work still can be done through the use of wood, wallboard and other non-critical materials. The fact that no steel, no tin, no copper or iron can be obtained does not prevent a home owner from planning a rehabilitation job. He can, for example, use wooden gutters and down spouts instead of metal; wood frames for metal screens; wood or composition shingles instead of metal; plain concrete walls of greater thickness instead of that usually reinforced with wire-mesh; vitreous ware plumbing fixtures in lieu of enameled iron, etc.

Savings and loan officials throughout the country are thoroughly familiar with priority restrictions, too, and can advise home owners as to the feasibility of such new construction, conversion, or repair projects as they may wish to undertake—within defense areas, or without.

Economists of the Federal Home Loan Bank Administration have estimated from the steady volume of mortgage recordings during the past year that many home owners are refinancing their old-style mortgages and taking advantage of the more liberal direct-reduction plan offered generally by savings and loan associations. This is an undertaking which can be accomplished regardless of where the property may be located.

So . . . if you are a prospective home owner, or an owner who wishes to convert, or remodel and you are living in one of the innumerable defense communities, or if you are living in a non-defense area and wish to repair or remodel and can use substitute materials —or if you want to refinance—the local savings and loan association will be glad to advise and serve you.

The FHA Plan OF HOME OWNERSHIP

"IN peaceful times, private investment in housing is a right. Today, it is a duty—one of the obligations of American business. America needs a great many houses — and quickly—for our production forces. Certain types of housing are as essential to our Victory as are ships and tanks and planes." This quotation from a recent speech made by Abner H. Ferguson, Federal Housing Commissioner, demonstrates the importance of defense home building and maintenance. FHA under Mr. Ferguson, is sustaining a two-fold program for these times: the renovation of old properties and the construction of new homes.

As a nation, we have an 80 billion dollar investment in homes. And these dwellings must remain in satisfactory condition, if we are to conserve this national resource. The FHA Defense Housing Plan makes available repair loans up to $5,000 (for periods up to five years) to turn homes and other dwellings into modern housing for more than one family. Under this plan, repairs can pay for themselves out of rental income. Repair loans up to $2,500, payable on monthly terms, are also available on the FHA. Pay-out-of-income Plan for remodeling homes and protecting property investments.

Any FHA office, or local builder, contractor, building material dealer, or financial institution qualified to make loans on the FHA plan, can give you information on converting your houses to include rental space, or on financing repairs for your home.

FINANCING A NEW HOME

The financing of a new home can be done through building and loan associations, savings banks, or insurance companies. Many of these institutions are FHA approved, which means that the FHA will insure mortgages they make. The FHA, of course, does not lend any money. Its function is to insure qualified lending institutions against possible loss. This does not mean that institutions not affiliated with FHA are not dependable and equally valuable in rendering service. A reliable company, and there is one in your community, furnishes a complete program of systematic financing. The chief features of the FHA Plan are (1) Lower financing charges; (2) long-term loans extending over a convenient period of years; (3) advance by the lender of a large part of the total value (up to 80, or even 90 per cent, if circumstances warrant); (4) repayment in monthly installments—about like rent—suited to the borrower's income; (5) inclusion of taxes, interest, and insurance in the monthly payment; (6) elimination of second mortgages and the need for periodic and expensive refinancing; (7) protection of the lender by FHA insurance; (8) improvement of housing standards and conditions.

STEPS TO HOME OWNERSHIP

The first step in building or buying a home is to decide how much you can afford to invest. Generally speaking, your income should be at least four times the monthly loan payment—or your total home investment should not be more than two or two-and-one-half times your annual income.

The next step is to decide on the location and type of home best suited to your family needs. The amount of the loan, repayment period, financing charges, and other specific details of the transaction are matters to be arranged between you and the lending institution. The down payment does not have to be met in cash. If you already own a building lot it may be acceptable as all or part of the down payment.

At the time the loan is made you will be asked to provide money for the first year's taxes, assessments, and insurance. This is somewhat sooner than in the case of an ordinary loan, but you have the satisfaction of knowing that all bills in connection with the property are paid up to date and insurance written for at least a year in advance. Interest payments are deductible from income taxes.

Once your home is financed on the FHA Plan, you are on the straight road to home ownership. Your "rent money" is paying for your home—while you enjoy greater living comfort and security.

FHA PAY-OUT-OF-INCOME PLAN

The FHA's program, for improving existing structures and insuring mortgages on new homes respectively, has been augmented by Title VI, designed to encourage investment in one to four-family houses offered for sale or rent in defense areas. The lender who finances rental facilities through this plan is offered a good return, at a negligible risk. The builder acquires maximum financing and terms as liberal as possible, based on FHA's long experience. Furthermore, the person who invests in this type of housing and holds it for rent stands to make a substantial profit on his investment and also enjoys certain income tax advantages not possible in the usual build-for-sale operation.

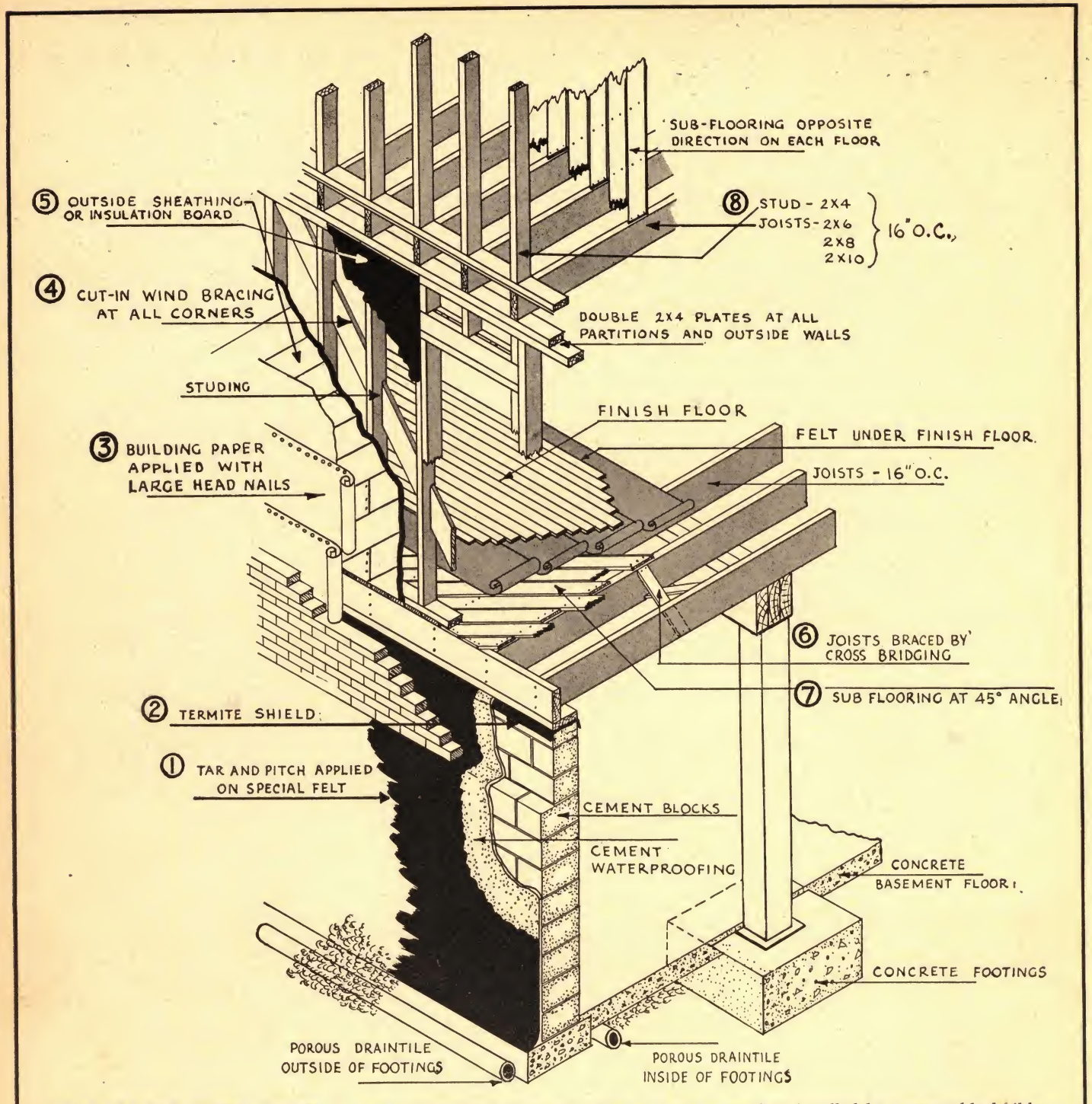
Monthly payments have been reduced, under this plan, by about eleven per cent, through the abolition of the so-called accelerated amortization provision. The sum of principal and interest payments on new loans is substantially the same each month.

Spare space at home can be put into profitable and patriotic use these days through the FHA Plan. You can fix up your home quickly to rent rooms, suites or apartments. Redecorating, shifting partitions, even adding a new wing can be paid for out of rental income.

Take, for example, the case of the Browns who lived in a defense area. They inherited a large old-fashioned house with 18 rooms and they decided to convert it into four apartments, one for themselves and three to rent. The local bank under the FHA Plan could loan them up to $5,000, with a maximum of five years to repay it, but they found they only needed $3,500. They worked out a plan to have two large apartments and two small ones. They kept one of the large ones for themselves and rented the other one for $45 a month and the two smaller ones for $30 each. This would give them an income of $105 a month while the amortization over five years only came to $64.74 a month, leaving a nice margin.

CONSTRUCTION

Building a house of quality materials and good workmanship is always cheapest in the long run. How to be sure that your house is being well-built is briefly yet completely explained in this section.



HERE ARE THE HIDDEN VALUES in good construction that you obtain when the work is handled by a reputable builder. While the construction shown is brick veneer, the owner has the option of any other type of exterior wall finish, such as shingle or siding.

EXPLANATION OF TERMS USED ABOVE

Bridging. Supporting and strengthening members of wood or steel placed between floor joists or beams to hold them in position.

Building paper. Heavy impregnated waterproof paper placed over exterior or floor sheathing (often between insulating materials) to add protection against the weather.

Footing. An enlarged base (usually of concrete) spread under foundation walls to distribute the weight of the building carried to the ground through these members.

Foundation. The base—walls of masonry usually placed on footings and designed to carry the entire load of the building—the supporting members of a wall or structure.

Joist. A horizontal supporting timber or steel member in a floor to support the floor (or ceiling).

Sheathing. A casing or protective covering for exterior walls or roofs. Usually wood boards or wallboards applied to studs, rafters or floor joists.

Shingles. Certain thin and sometimes tapering pieces of wood or composition, burned clay or slate, used in courses to cover roofs or sidewalls.

Siding. Wood finish in shaped board form to complete the exterior of a house.

Wallboard. A composition of gypsum, desiccated wood, sugar cane or other fibres molded or rolled in thin flat sheets for application on structural members of the house such as studs, joists or rafters. Often comes as an insulating material known as rigid insulation board.

Build Your Home TO ENDURE FOR YEARS

THE planning and building of a new home should be experienced at least once by every family — seeing your own ideas executed in wood, plaster and masonry, makes any other purchase you ever made in your life fade into insignificance. It is one of life's most thrilling moments.

Building "castles in the air" is one thing—but when you are building your home you want to be sure of quality products and good construction. You can't tell much about how a house was built after it is finished as some of the important things are down under the foundations, beneath the floors, hidden in the walls or up above the attic. You want to be sure your house will endure.

FOOTINGS, the concrete base for the foundation walls, should be at least 8″ wider and 8″ or more deeper than the wall.

Foundation Construction

Correct foundation construction begins with concrete footings placed to run continuously with the outside and lateral walls. Footings should be at least 18 inches wide, 10 inches deep and the top surface exactly level. Where basements occur, footings should project at least 6 inches from the vertical line of the wall on both sides. For concrete walls cement should be used in the proportion of 1 part cement to 3 parts sand and 5 parts stone. For masonry walls use enough cement in the mortar to avoid disintegration under extreme moisture. To insure a dry basement, outside walls and rough concrete floor should be water-proofed with hot tar and pitch applied over several layers of special felt. This membrane should be continuous, running entirely under walls, over the footings and up the side walls to the grade line. The finished cement floor then is flowed on over the membrane (Fig. 1).

CUTTING COST CORNERS

NO MATTER what sized home, every family which has ever started to build has been faced sooner or later with the necessity of "cutting the cost." It is better to make savings in small items than to reduce the size of the house. Below are a few suggestions as to how you may "cut" the house you want, which has turned out to exceed the budget. Added together these small economies amount to an astonishing sum of money.

For screen savings, why not use the galvanized half-window length kind?

It is not necessary when you are building a new house to finish both bathrooms. You can have the pipes set, and then lock the door 'til you can afford the kind of plumbing you really want.

Siding for the outside of the house comes at various prices. Some of the best looking kinds are the least costly.

If your land is dry, use concrete blocks instead of poured cement foundation.

Good wood-frame construction. is cheaper than stone or masonry It will last as long as you live, and longer!

Maybe you can get by without a basement or perhaps just a half basement is all you really need. Here's a big saving.

Even gutters along the eaves can be left off, if you will lay a bed of gravel or cinders to catch the drip, and set your plants beyond the line of the roof edge.

If you are burning coal now but hope some day for oil, you can most economically wire for the thermostat while the house is being built.

The style of your house will have much to do with the cost. Square or rectangular shapes are cheapest to build. It's the quirks and turns and the broken-up roof lines that add to the cost. Remember, too, that the two-story house requires less basement and less roofing for the amount of living space provided than a one-story does.

Rough plaster left gray makes an interesting wall texture. Or you can finish-plaster a spare room and leave the floor laying for later.

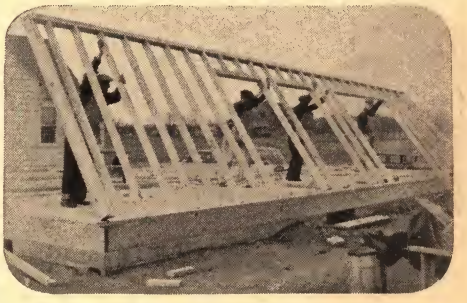
Stairs are cheaper if built between partitions.

Eliminate gingerbread trimming on the exterior of the house. Keep it simple and let the proportions of the building make it beautiful—not the fretwork.

Look over the stock mill work which your lumber dealer has to offer. You'll be surprised at the modern improvements in such lines.

Dear to the heart—and the pocketbook—are the recessed radiators. Maybe this is one place to sacrifice preference for economy. They can be built in later.

As the concrete foundation wall is poured (or when constructed of brick or masonry) place foundation bolts of at least ¾ inch diameter at intervals of 6 to 8 feet throughout the circuit of the outside wall, but always at each corner. These should be sunk to a depth of 18 inches minimum, with the threaded end protruding above the top surface high enough to extend through the thickness of the wood sills. When the concrete or cement mortar has set, place the metal termite shield in position (Fig. 2). Then follow with the sills which are bored to fit over the bolts. Fasten securely with wide flanged gaskets and thick nuts screwed down tightly with a wrench. By this method, foundation and sills become an integral unit, providing proper anchorage for the entire house structure.



STUDS, the skeleton for house walls, should be no more than 16″ apart, and should be nailed at the bottom to *plates.*

Framing

In framing, wall studding, joists and rafters are set 16 inches on center. In two-story houses the platform or Western type of construction is recommended (Fig. 8). This provides a platform one story high, built entirely over the first floor. Second story wall studding then are raised above the second floor platform resting solidly on plates spiked into position over the sub-floor. Greater rigidity of framework results from this method, as compared to the balloon type in which studding runs continuously from sill to second story ceiling joists . . . because, in the platform type, caps and plates incidental to the second-story construction, serve as extra bracing.

Reinforce all corners by using 5 full-length studding, extending from sill to rafters. Use 6 studding in the same manner where "T" angles occur. At all corners on the main structure add extra bracing by placing stud reinforcements at an angle of 45 degrees from the line of the sill (Fig. 4).

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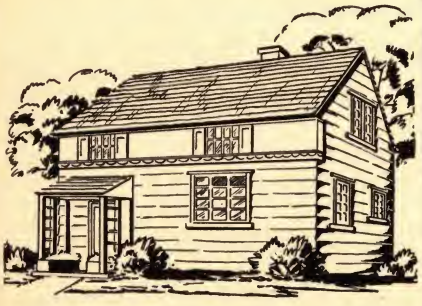
DEVOE PAINTS



Devoe's famous 2-Coat System

DEVOE'S 2-COAT SYSTEM of house painting puts next to the wood a scientifically developed undercoat of paint that seals the thirsty pores and lays a solid, non-cracking foundation for the outer coat — that goes next to the sun.

For this top-coat, Devoe scientists have developed for you a paint of high, economical coverage that fights sun and weather . . . resists fading and staining . . . stays clean and fresh longer, for there is no place for dirt or soot to lodge. With this famous Devoe 2-coat System, you save *one* coat and gain twice the life of ordinary paint.

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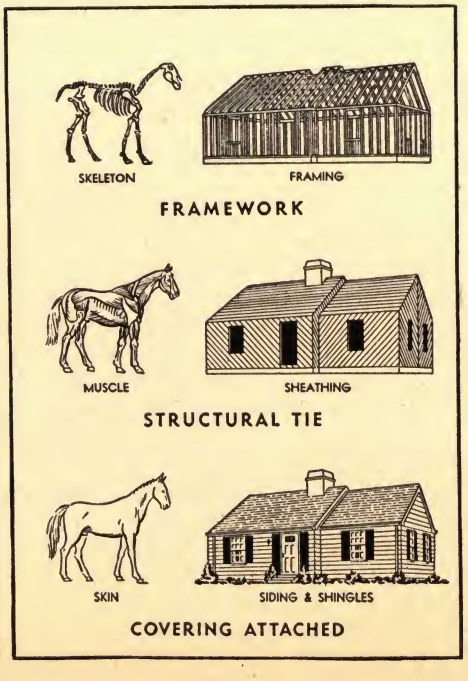
THE RAFTERS that support the roof are put in place, and meet the ridge-board with flush and accurate joints and spiked to the attic floor joists and plates.

Studding of 2″x6″ for the outside wall are preferable to 2x4's. They provide greater rigidity, more air space between inside and outside sheathing . . . an advantage when interwall insulation is used . . . greater depth and consequently more attractive appearance to window frames and interior sills. With either width, always install one tier of blocking between studs, placing it at half the height of each story wall.

While blocking between studding prevents vibration, it should be supplemented by capping the studding with double plates at the ceiling height of each story. Again, all studs which frame the outside and inside wall openings should be doubled. Floor and ceiling joists should be securely spiked to the wall stud wherever they engage each other, with 4 spikes driven through both members and clinched. Floor and ceiling joists should be braced by cross bridging (Fig. 6). Run one series of such bridging for each 10 lineal feet of joist bearings.



Laying Roof Shingles

Rafters of 2″x6″ for the roof of even the smallest sized house are preferred to 2x4's. As in the case of studding and floor joists, these rafters, where they engage the ends of the ceiling joists, should be securely spiked together and clinched. If you select wood shingles use shingle sheathing strips of 1″x4″ kiln-dried material. These should be placed 3 inches apart and nailed at each joist with 2 cement-coated nails. Over these, lay edge grain red cedar shingles, measuring at least 18 inches in length and not less than 5 shingles to 2 inches of total thickness at the butt. Lay shingles not more than 4 inches to the weather, attaching them with galvanized or cut iron nails. When shingles are dipped, be sure the stain extends at least 7 inches from the butt.

Sun decks where walking is desirable can be tile, large sheets of composition roofing, or built-up layers of felt impregnated with tar or asphalt.

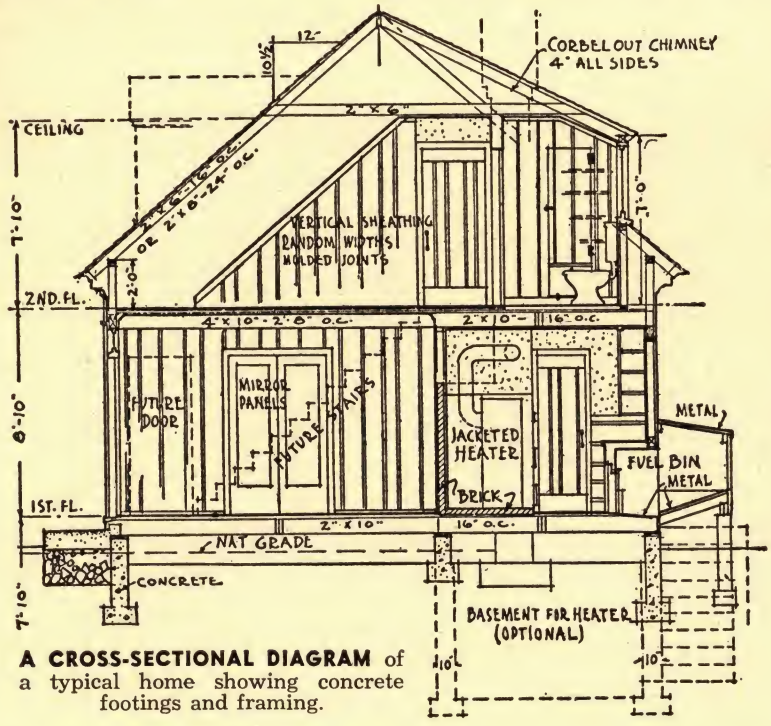
Exterior Walls

As indicated in the drawing, the builder has the option of using either diagonal wood sheathing (Fig. 5), or insulation board sheathing. Structural insulation board may be asphalt coated. While the finished exterior wall construction shown is brick veneer, the owner has the option of any other type of exterior wall finish, such as red cedar shingles, novelty siding or wide bevel siding, et cetera. If wood sheathing is selected apply outside sheathing at an angle of 45 degrees to the vertical line of the studding (Fig. 5). Sheathing material should be 1x6 inches kiln-dried, surfaced four sides and preferably center and end-matched. This pattern affords a tight, integrated wall of useful bracing strength. If center-matched stock is not available, kiln-dried shiplap is preferable to square-edged boards. Over the sheathing apply a complete interliner of strong building paper, attaching it to the sheathing with short broad-headed nails. Over this apply

the clapboard or lap siding exterior wall, using not less than 3 cement-coated nails driven through the face of each clapboard at each stud. At this stage, the painter should follow close behind the carpenter, applying the priming coat of lead and oil, so that no unpainted surface of the outside finished wall may be exposed to the weather overnight.

Exterior Brick Walls

An exterior wall built of brick and hollow clay tile is bonded with brick. The plaster base is insulating wallboard nailed on ruling strips.



A CROSS-SECTIONAL DIAGRAM of a typical home showing concrete footings and framing.

The popular cavity wall construction of brick and hollow clay tile can have fill-insulation in the cavity if additional insulation is desired.

Partitions

Where partitions carry a load from the second floor or serve as an anchor for the roof bracing in one story construction, they should be supported by double floor joists and capped by double studding. Where placed over first floor girders, double joists can be omitted. In general, extra members used to insure adequate bracing and rigidity at every point of vertical or horizontal stress, more than justify the small additional cost. Partitions which engage opposite outside walls at or near the center of the structure should be tied securely to both walls as a medium of extra cross-bracing.

Interior Walls

With the plumbing roughed in, heating ducts or pipes installed and electric wiring completed, surfacing of the interior walls follows. Installation of woodwork and paneling should await the complete drying of any plaster used in the house. Drying can be expedited by operating the heating plant a few days . . . a procedure to be followed in any season, but imperative during winter or wet weather.

Floors

Lay sub-floors at an angle of 45 degrees to the line of the joists and nail with 2 nails at each joist (Fig. 7). While square-edged boards sometimes are specified, center and end-matched kiln-dried material is preferable. The latter provides a smooth, tight floor, affording a stabilized base for the finished floor, as well as extra cross-bracing for the structure. Installation of finished floors should be deferred until all work inside the house has been completed.

Buy Good Paint

Paint is the first line of home defense. From roof to driveway—inside and out—paint protects your home against deterioration, decay and moisture. Each coat of paint is a preservative that is sanitary and easily cleaned. Its color can work wonders throughout the home. See page 77.

Good painting is the product of three ingredients: (1) a paint of the right composition for the particular job; (2) good painting conditions at the time the work is done; and (3) good workmanship. Since the labor is usually two or three times the cost of the materials, it is economical to buy quality paint. A good painter will take great precaution with the preparation of the surfaces and will wait until the weather is good for outside work or the plaster is amply dried out for interior work.

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YOUR NEW *Home* VISAGRAPH

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EXTERIOR VIEW

OWNER

LOCATION Any DEFENSE TOWN

OUTSIDE WALLS: Natco, Western Pine, Wood Siding or Centigrade shingles - Carey
SHEATHING: asbestos cement
Wood or Celotex
WINDOWS: Anderson, Curtis or Fenestra, Rusco combination

PAINT: Brewing, De Voe & Reynolds
TRIM: Wood - Curtis
FOUNDATION: National Fireproofing
DOORS: Wood - Curtis

ROOF: Carey or Celotex, asphalt Centigrade Red Shingle 5/4
PITCH: 9.5 X 12
METAL:
CHIMNEY: Common brick with T.C. flue lining

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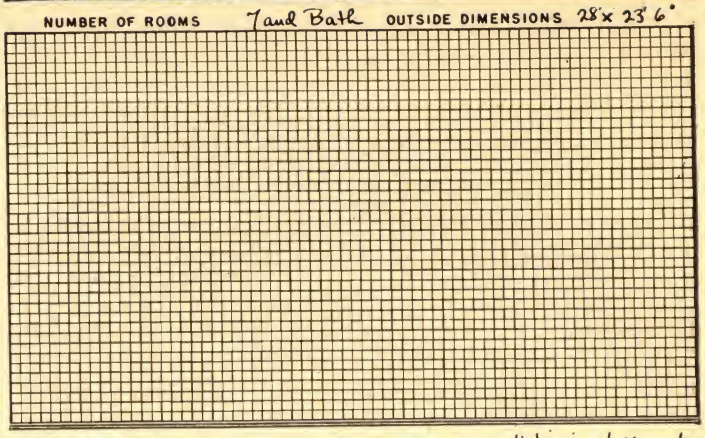
Page 1

FLOOR PLAN

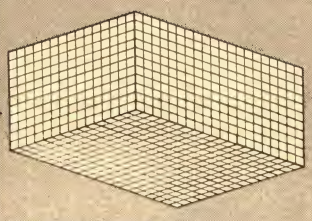
NUMBER OF ROOMS 7 and Bath OUTSIDE DIMENSIONS 28'x 23'6"



FEATURES: Tri-level - saving expense of digging basement
Front entrance vestibule - Rear service door.

LIVING ROOM

CEILING - Smooth plaster - painted or papered
WALLS & FINISH Walnut Plywood Baring Finish
FLOORS & FINISH Oak - waxed
WINDOWS Anderson - Curtis or Fenestra
DOORS Flush or 2-panel Fir



SCALE: EACH SQUARE = 1 FOOT

FIREPLACE-MANTEL Future
CLOSET None
LIGHTING & OUTLETS 4 convenience outlets Vidrin Fixtures
TRIM Wood - Curtis
BUILT-IN-FEATURES Bookcase shelves

Page 2

BASEMENT or UTILITY 11' 6" X 16' 3"

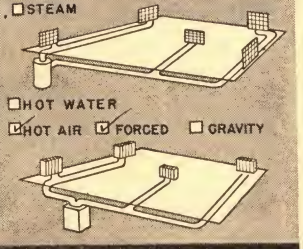
CEILING unfinished
WALLS & FINISH unfinished
FLOORS & FINISH concrete
SASH wood
AREAWAY none
DOORS Curtis
LIGHTING & OUTLETS 2 drop cord lights 2 convenience outlets

LAUNDRY TRAYS Double
WASHER not included
TOILET future
SHOWER future
PIPES galvanized and cast iron
UTILITIES INLETS Square-D multi-maker
INCINERATOR not included
BUILT-IN-STORAGE coal bin

HEATING ■ COAL ■ STOKER ■ GAS ■ OIL

☐ BOILER Burnham - Utica Fitzgibbons
☐ PIPES
☐ RADIATORS
☐ CONTROLS Minneapolis - Honeywell

☑ FURNACE Fitzgibbons
☑ DUCTWORK
☑ GRILLES



☐ STEAM
☐ HOT WATER
☑ HOT AIR ☑ FORCED ☐ GRAVITY

PORCH

ROOF
CEILING
COLUMNS
FLOOR
RAILING
LATTICE
SCREENS
STEPS
LIGHTING

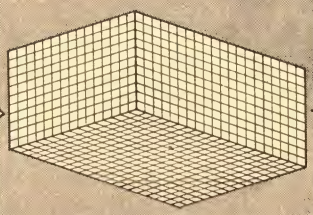
ATTIC

STAIRS Cleats + attic storage
TRAPDOOR
FLOORS & FINISH rough
WALLS & CEILING unfinished
BUILT-IN-STORAGE
WINDOWS
VENTILATING louvers

Page 3

BEDROOM 3 8'5" X 10'7" Nursery or Study

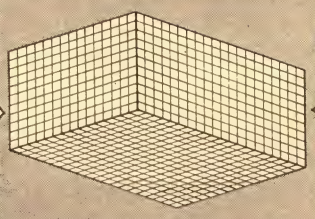
CEILING Smooth Plaster
WALLS & FINISH Wrestan Fine Mu. Wood Celotex
FLOORS & FINISH Oak - waxed
WINDOWS Anderson Curtis or Fenestra
DOORS Flush or 2 panel Fir



CLOSETS 2 adjoining each 5'10" wide x 2'4" deep K-convenience
TRIM Wood - Curtis
LIGHTING & OUTLETS 2 convenience outlets
BUILT-IN-FEATURES Shelves in closet

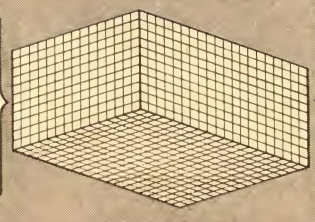
Reception Room & Vestibule 8'5" X 10'7"

CEILING Smooth Plaster - painted or papered
WALLS & FINISH Walnut Plywood Baring Finish
FLOORS & FINISH Asphalt Tile on 4" Cinder concrete
WINDOWS Anderson - Curtis or Fenestra
DOORS Curtis



CLOSETS
TRIM Wood - Curtis
LIGHTING & OUTLETS 2 convenience outlets Vidrin Fixtures
BUILT-IN-FEATURES Glass Shelves

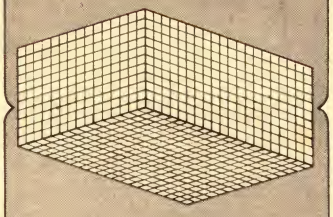
____ X ____



Page 4

BATH 5'7" X 5'5"

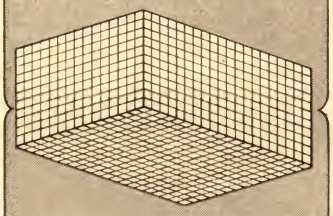
CEILING: Smooth Plaster Painted
WALLS & FINISH: See above
WAINSCOT: Marsh or Gibbs Boardtile
FLOORS & FINISH: Linoleum
DOOR: Curtis - Mirror
WINDOW: Anderson - Victory



TUB: as selected
SHOWER: Speakman
TOILET: Douglas
LAVATORY: Douglas
MEDICINE CABINET: Miami #406
ACCESSORIES: Miami
LINEN: Closet in Bath
LAUNDRY CHUTE: Donley

KITCHEN 11'9" X 11'9"

CEILING: Smooth Plaster Painted
WALLS & FINISH: Smooth Plaster Painted
WAINSCOT: Gibbs or Marsh Tileboard
FLOORS & FINISH: Linoleum
WINDOWS: Anderson - Curtis or Fenestra
DOORS: Sliding 2 panel Fir or Birch
CABINETS: Curtis



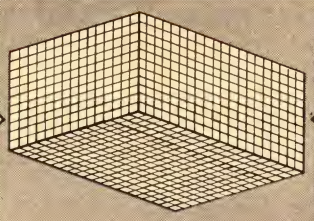
SINK: Tracy
DISHWASHER: None
GARBAGE DISPOSER: In-sink-erator
RANGE: not furnished
REFRIGERATOR: not furnished
WATER HEATER: Hotstream
BUILT-IN-FEATURES: Buffalo Davenport
LIGHTING & OUTLETS: 4 convenience outlets

Page 5

DINING X

Future - use dining area in kitchen

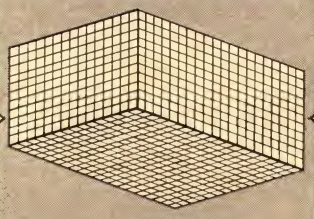
CEILING
WALLS & FINISH
DOORS
FLOORS & FINISH



LIGHTING & OUTLETS
WINDOWS
TRIM
BUILT-IN-FEATURES

BEDROOM - 1 14' X 19'9"

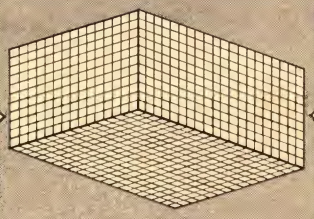
CEILING
WALLS & FINISH
FLOORS & FINISH
WINDOWS
DOORS



CLOSETS
TRIM
LIGHTING & OUTLETS
BUILT-IN-FEATURES

BEDROOM - 2 10'7" X 11'9"

CEILING
WALLS & FINISH
FLOORS & FINISH
WINDOWS
DOORS



CLOSETS
TRIM
LIGHTING & OUTLETS
BUILT-IN-FEATURES

Page 6

INSULATION

CEILING: Balsam Wool - Celotex - Carey Reflect-O - Zonolite - Mineral Wool - Kimsul
WALLS: See Ceiling
ROOF:
WEATHERSTRIPPING: Provided in sash
STORM SASH: Rusco
FLOOR:

HARDWARE

ENTRANCE DOOR: McKinney or National Brass
SIDE & BACK DOOR: "
INTERIOR DOORS: "
HINGES: "
WINDOWS: "
CUPBOARDS & CABINETS: "

PROTECTION

TERMITE SHIELDS: Treo
BUILDING PAPER: Sisalkraft
CAULKING: Around Exterior Openings
WATERPROOFING: As required by site

MISCELLANEOUS

FLOWER BOXES
SHUTTERS: Front upstairs window
SCREENS: Rusco
VENETIAN BLINDS
SHADES: Clopay
CHIMES
PACKAGE RECEIVER: Donley
MAIL BOX: Donley
HOUSE NUMBER: Metal

GENERAL

Page 7

GARAGE X future

ROOF:
EXTERIOR:
FI
RES:

The sample *Visagraph* presented herewith (1/4 size) makes it easy for you to specify the exact materials and equipment which you wish in your new home, or the one you are modernizing. Space is provided for every specification. Lumber dealers use the *Visagraph* in a special cover for complete home proposals. See your lumber dealer or send 10c each for the number of copies you need to National Homebuilders Bureau, Inc., 572 Madison Avenue, New York.

LOT 50' X 100' NO. BLOCK SETBACK 40'

GRADING:
ROUGH ☒ 6" above front walk
FINISH ☐
WALKS: flagstone
DRIVE: future
TERRACE: future

SODDING: at Terrace only
SEEDING: Woods of lawn
PLA[illegible]: Estimate
Dogwood, Pfeil, Way, Schling

SCALE - EACH SI

NATIONAL HOMEBUILDERS BUREAU, Inc.
572 Madison Avenue, New York, N. Y.

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Page 8

Housing Needs MET BY CONVERTING OLD HOMES

EDITOR'S NOTE: There is really no difference between conversion or modernizing and building a new home except the savings in the cost of the structure. All of the principles set forth in this book are basic and apply to modernizing as well as new homes. Now due to the fact that every bit of material must be saved, we urge our readers to look around them for a place that can be reclaimed for housing their families and providing extra room rental space for the War's duration.

THE present scarcity of housing accommodations of even the most meager sort is so urgent that all types of buildings in defense areas are being converted into either single or multiple dwellings. Old houses which are well located and structurally sound can be made to do double or triple duty for national defense by converting them into multiple-family dwellings. As a matter of fact it is not unknown to see out-moded school buildings, old factories or anything with four solid walls and a sound roof, converted into apartments and dormitories.

The amount of material and the number of working hours thus saved are an important contribution to the national endeavor to conserve resources.

The owner of any kind of a structurally-sound building, by the use of modern building materials, such as wallboard, pre-cut lumber and other assembled units that are available, plus a small amount of sound planning and imagination, can convert his property into a solid income producer, at the same time that he contributes to the national crisis in housing.

Even though priorities covering critical materials may intefere with the easy fulfillment of his ideas, a small amount of ingenuity will show where concrete receptacles for showers may be substituted for cast-iron bases, and the necessary piping may be secured from the thousands of miles of second-hand pipe that fill the nation's junk-yards. A short piece of perforated pipe makes a splendid showerhead and a substitute for the brass variety to which we are accustomed. Many other ideas along this same line may be developed by the individual who is determined to make out despite conditions.

All over the country private houses are being converted into two and three family homes, and even though the size of the rooms may be restricted, they are far more desirable then the trailer camps and the make-shift shacks that are at present housing a certain proportion of the country's war workers. A visit to some of the communities that have sprung up around the new industrial plants will give one a fair idea of the necessity of immediate and adequate housing facilities of a permanent, comfortable and sanitary type. These three commodities are only available where good construction and modern plumbing have been used.

From a practical standpoint, the conversion of a large house into a two-, three-, or four-family house is not a very difficult undertaking provided the proper amount of forethought and study is given to the problem. While consideration must be given to the installation of additional plumbing and heating equipment, the main part of the alteration, of course, consists of the partition work that may be necessary to divide the present large rooms into smaller units, or the division that might be required to develop a living room so that access to the stairs is available without passing through the new rooms.

This work can be permanent or more or less temporary. The erection of two-by-four studding, sheathed on both sides with any good wallboard, makes an almost soundproof wall. If the studding is set up so as to bear on a plate on the floor, and a cap is placed at the top, the partitions can be removed at a later date without injury to the ceiling, plaster or floors which it is dividing. If substantial board is used on both sides of the partition, there will be sufficient insulation to provide privacy and quiet to the occupants on either side. Incidentally, these wall coverings may be salvaged and used later for any other purposes.

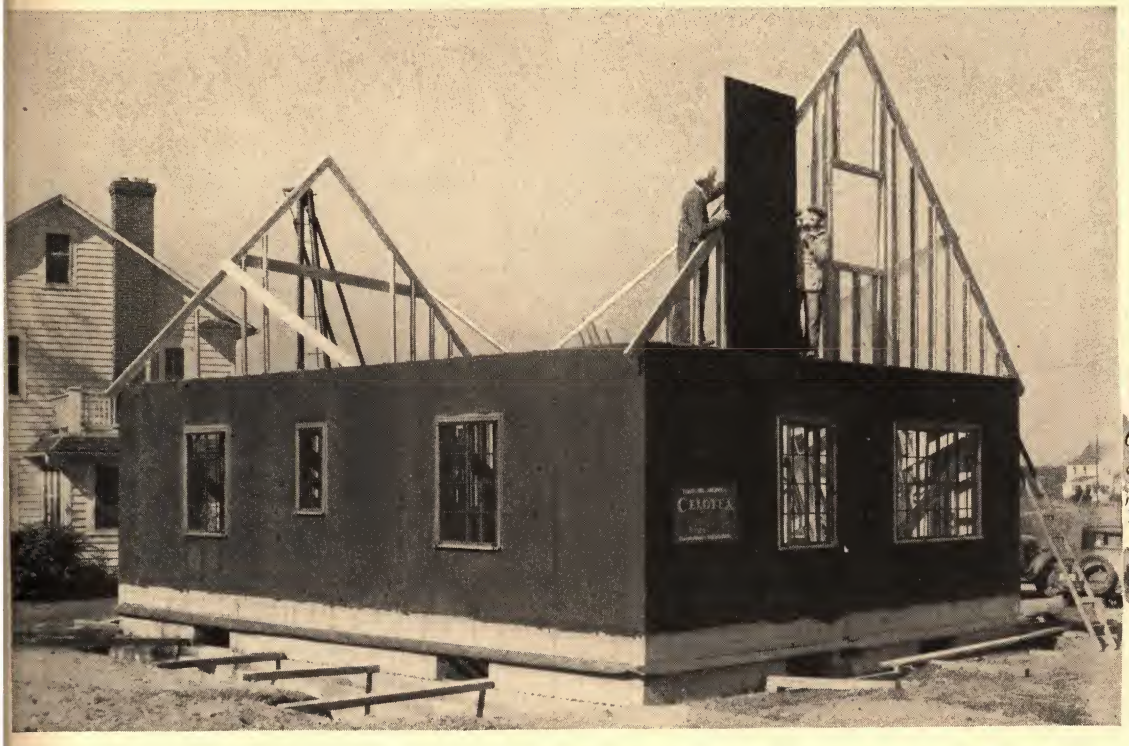
From the angle of adequate heating, it may safely be said that if the present heating plant has been satisfactory for the old house, it will undoubtedly be ample for the subdivided rooms. As a matter of fact, any heating plant that will take care of eight or ten large rooms, with their draft and cross-ventilation possibilities, will better take care of heating the same area when it is divided into smaller units. The large radiators that were formerly required may be split, and the sections rearranged so as to provide the necessary radiation for the smaller rooms. The amount of fitting required for this heating rearrangement is small.

If the heating plant has not been adequate, in some cases sections may be

THE COST OF CONVERTING this house into a three-family dwelling was about $1200. The owner uses the first floor and rents out the upstairs and the small house at the rear. The income more than pays for the modernizing amortization payments—a worthwhile investment.

Build for Victory

—and BUILD BETTER with CELOTEX



Celotex Structural Insulation Conserves Vital Materials—Assures Fuel Savings and Comfort—Adds Permanent Value

NOW, more than ever, the small home owner should select materials wisely. And the short time it takes to check specifications with your builder, can pay big rewards. It can be a means of saving on building costs. . . . It can assure you year 'round comfort and fuel savings. . . . It can mean increased value *now*, or at a time you may wish to sell.

Celotex Structural Insulation saves building dollars and conserves vital materials because it does two jobs at one cost. Celotex Vapor-seal Sheathing replaces ordinary sheathing—*insulates and seals the walls as it builds.* Celotex Vapor-seal Lath is used in place of ordinary lath—insulates and seals to assure snug comfort. Due to present limitations imposed by the government on the size of heating plants, efficient wall insulation is a necessity. Vapor-seal Sheathing and Lath, used in combination, provide this insulation at minimum cost.

Before you build, see your Celotex dealer. He'll help you own a better home at less cost. He'll show you how Celotex Vapor-seal Sheathing and Lath will help keep your home cooler in summer—assure you the utmost warmth and comfort from the *smaller* heating plant war-time conditions require you to install. He'll explain how they add *permanent* value to your home and are guaranteed in writing for the life of the building.* He's a good man to meet.

By simply mailing the attached coupon you can secure *free* information on the use of money-saving Celotex Building Products in small homes of all types. If you are particularly interested in the "Victory Home" be sure to check the coupon in the space provided. Mail the coupon now.

**This guarantee, when issued, applies only within the boundaries of Continental United States.*

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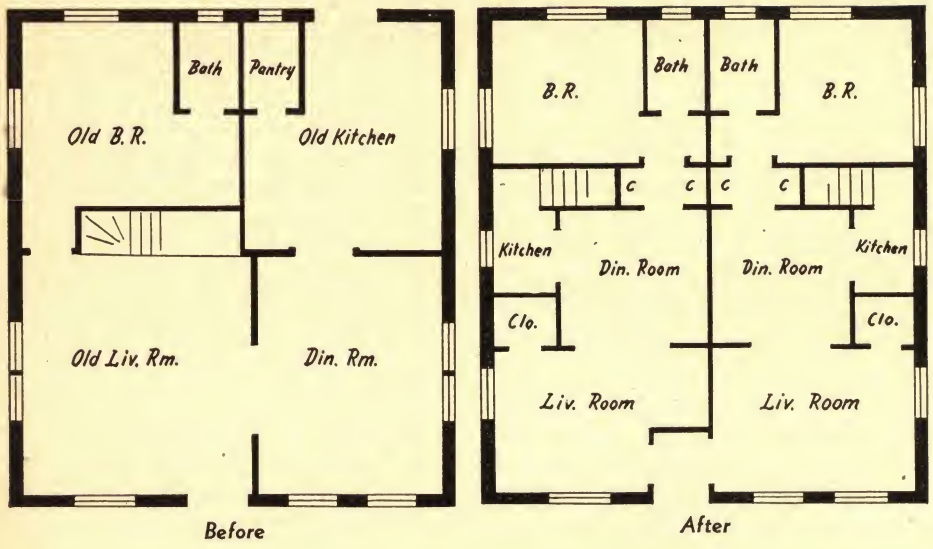


BEFORE-AND-AFTER FLOOR PLANS illustrating how one house was divided into a two-family home. The single-door entrance gives a better appearance from the street and the entrance hall, with two independent doorways, serves both families.

added to the boiler or insulation of the house may so reduce the heating load that the original boiler will be adequate.

In neighborhoods where there is a demand for the better type of apartments, zoning of the heating plant in order to give each apartment individual control over temperatures may be advisable. This can be done by thermostatic valve controls on individual radiators in each room or by a separate pipe circuit for each apartment. Each suite then has its own thermostat which controls the operation of the circulator for this group of rooms.

Another of the first points to consider in the rehabilitation of an old house is the location of the additional bathrooms and kitchens. Plumbing contractors are experts in finding spaces where bathrooms can be located most economically. Most old houses sprawl and ramble unnecessarily and provide several options for one or two additional bathrooms. Hall-ends, oversized bedrooms, and spaces under stairs can be transformed into fully-equipped bathrooms or first-floor washrooms. The installation of additional washbasins either in the corner of the rooms, or in hall closets would not be difficult nor would it involve much plumbing.

A Typical Conversion Plan

Small Homes Guide presents two floor plans particularly pertinent to the new idea of more housing facilities in the same available area.

The first plan shows a typical first-floor layout. There is a large living room, a large dining room, a kitchen and pantry, and a small bedroom and bath. Space-saving or conservation was not of any importance when this house was designed. As with most American homes of a past generation, spaciousness was supposed to reflect ease and comfort. If one traveled miles during the course of a day getting about the house, nothing was thought of it.

The second floor-plan shows the identical house after it had been converted into a two-family dwelling, with every modern facility for comfortable living without waste of space. Very little heavy structural change was involved in this job. Most of the work was partition work, and even the bearing partition behind the old staircase was used in the construction of the two new stairs. Only two new windows had to be cut in the walls, and it may be noted that half of the double sash in the old living and dining rooms were used for these.

Starting at the front of the house, it can be seen that a compact vestibule was built just inside the front door. This gives access to the two apartments through independent doorways. The old living room at one side of the house has been converted into a living room and a dining room, and the change in the stair plan has provided a small but fully equipped kitchen. The old bedroom has been somewhat contracted, but is ample, and the old bath remains.

On the other side of the house, the old dining room has been divided to present a similar arrangement. In both sides the small center room houses folding beds so that the floor plan furnishes two bedrooms at night. The former pantry of the old kitchen is now a bathroom, easily accomplished because of the proximity to the lines that supply the old bathroom. The former kitchen door has been replaced with a window for the bedroom.

One of the startling things about this particular job is the amount of closet space. While the old arrangement was spacious and wasteful, it had no closet space whatever, while under the new plan, each apartment has two clothes closets on the first floor.

The second-floor plan, which is not shown, follows quite closely the design for the first floor, inasmuch as originally it had four corner bedrooms and a small bath at the rear. These have been changed so that each side of the house now presents two bedrooms, a bath, dressing room and ample closets.

There has been no change or alteration in the basement except that the old cellar entrance, which was formerly under the stairway, has been made into an outside entrance. No roof-work or masonry were required for the alteration whatever.

It might be thought that the stairway changes involved considerable expense, but on the contrary, they did not. The second-floor joists run across the house from side to side, bearing on the center partition. Two of these were taken out, and the openings for the new stairs framed in easily. On one of the new stairways, the old risers and treads were used.

The heating plant, a fairly modern oil-burning type of steam equipment, was retained, and is amply sufficient to heat both apartments comfortably. No changes were required in the house-sewer, vent lines or other main arteries of the building.

Utilizing Wasted Space

When a house is converted so as to furnish additional housing facilities, there may well be a shortage of what the family formerly called "lounging" or play room space. Naturally, it will be missed unless some thought is given to its replacement. Fortunately, there are few homes without attics or other neglected spots which can be used for this very purpose, and it is astounding what can be done with them.

The attic shown here was never utilized until the house was converted into a two-family dwelling. It was a cold draughty, open room. Less than fifty dollars made it over into as comfortable and livable a spot as could be desired.

The pictures plainly show what has been accomplished with the formerly dilapidated space, by means of some imagination, quite a bit of insulating board, and old discarded furniture that needed nothing but bright enamel.

The major part of the converting job consisted of sheathing the roof beams and side-braces with half-inch insulating board. This was nailed directly to the timbers, and the joints covered with finishing strip. Instead of carrying out the covering to the peak, the owner flattened out the ceiling just above the window framing, and in so doing, gave the effect of a much larger room, and, at the same time, less the effect of a converted attic. The fireplace, of course, is false, but nevertheless decorative, and breaks up what would otherwise be an uninteresting wall. The plain open book-case opposite balances things nicely.

The rough floor was stained and waxed and makes a perfect base for the entire scheme. Walls and ceilings were painted two coats of sea green flat, without contrasting color on the stripping over the joints.

In the lower left hand corner of the finished picture may be seen the old open stairway that led to the attic. A bulkhead was built around the opening, and topped off with a wide shelf on which are placed various ornaments.

The finishing off of this space practically paid for itself in a year, for the reason that the lining of the attic saved very nearly thirty per cent in the fuel bill. When the owner did the remodeling, he gave no thought to this, but noticed the improvement in the steady temperature of the whole house, as well as the shrinkage in the fuel bill.

There are, of course, many homes that do not have an attic large or high enough to treat in quite as elaborate a manner as that shown, but there are few that do not have some sort of waste space that can be put to use, even though it be only to make a small den or study out of it. Every home owner should make a survey of what space is available, and see if it could not be utilized to some advantage. There is one rule about this, however: do not rush into the expenditure or the effort until sufficient study has been given to the problem. The owner wants to remember that space can be used for other purposes than simply a place to sit. Perhaps more storage space is required, or cedar-lined closets can be provided for winter clothing, or there is a need for extra guest rooms. Study your particular family requirements.

THE LOWER PICTURE IS TYPICAL of many attics which can be converted into most attractive and usable space as an extra bedroom, playroom for the children on rainy days, a library or a rest room. It also provides an extremely quiet room for reading or study.

A KITCHEN TRANSFORMED from a drudge shop into an efficient and inviting room. First a plan was made—then suitable fixtures selected. A new settee and table for dining or kitchen work replace the old-fashioned chairs and table.

Virtually the same procedure can be followed in the kitchen. The accompanying illustration shows very clearly what is meant. First the planning must be done, generally with the assistance of an architect, a practical builder or your local lumber dealer, because they are experienced, and your problem is one of many in their long careers. Then the fixtures must be selected with a particular eye to their durable character, to their proportions, and to their suitability to your family requirements. It may be noted in the illustrations covering the kitchen modernizing, that the original gas-range has been retained and fits perfectly into the new scheme. A new settee and a substantial table, which can be used for dining or for kitchen work, replace the old-fashioned table and its homely chairs. Good taste has been displayed in decorating the room, and there is harmony and an inviting air, where formerly existed an almost grim look. Here is an unusually fine demonstration of the conversion of a drudge-shop into a room where one would like to work, or merely sit down and look around in.

ROOFS . . . *for Beauty . . . for Permanence*

YOUR roof should enhance the architectural style of your home and provide long life and maximum protection against the elements. Ample consideration and care beforehand will prevent dissatisfaction.

There is a definite roofing material intended for the particular type of house you are about to build. For example, suppose that the exterior of your house has a generally rugged look. You should select a roofing that will present a heavy shadow line by its thickness or method of application, that will have a substantial and strong color and follow out the general sturdy appearance of the rest of the building.

The varieties in texture, color and weight of the roofing materials on the market today, leave no excuse for a roof that is out of step with the rest of the house.

Types of Roofs: There are four general types of roofs: (1) flat; (2) gable—two sides running up to a ridge, leaving gable ends; (3) hip—a roof in which all four sides come to a peak or ridge, with skylights or dormers necessary for light; (4) gambrel—the result of a desire to enlarge the attic headroom by bending out the slopes of a gable roof.

Insufficient pitch probably causes more troublesome roofs than any other single factor, especially in climates where there is considerable snow. In climates where the snowfall is very heavy, the pitch should be not less than one-third.

The principal types of shingles are wood, asphalt, composition, asbestos and tile. Other types include slate; metal roofings of tin or zinc, or copper in sheet or shingle form, and rolled or strip composition roofing.

With the theme of American home construction for 1942 emphasizing economy and non-critical materials, a perceptible increase in the popularity of red cedar and asphalt shingles for roofs is to be noted.

In view of the fact that ceiling limitations have been placed on the cost of homes, much attention is being given to the selection of economical building materials which will give long years of service with a minimum of upkeep. Combined with this requirement is that of selecting building materials which have been adjudged by leaders of the nation's rearmament program as "non-critical"—materials whose use will not impair or deter in any way the shaping of an efficient war machine. Both wood and asphalt shingles meet these two requirements.

THIS ALL-SHINGLED HOME, with red cedar shingle roof and double-coursed shingle sidewalls, cost in the neighborhood of $3,500. Size and economy need not be reflected in appearance.

A particularly popular and effective type of shingle sidewall construction is known as "double-coursing." This calls for the application of two layers of shingles for every course, which permits the use of long exposures. The outer course is usually No. 1 grade shingle, while the inner and completely concealed course is of No. 2 or No. 3 grade stock. Further economy is brought about by the long weather exposures, permitting an increase in wall area coverage per bundle of shingles.

The sturdy and attractive appearance of double-coursed shingle sidewalls camouflages their economy of construction. Deep shadow lines are produced by the double shingle layers; these heavy, horizontal shadow bands impart a sense of strength and sturdiness to the home.

Home renovating and remodeling, also lends itself to double-coursing, as the shingles are applied right over the old existing walls. They can be applied over brick and stucco through the use of furring strips, and directly on old clapboard or other wood siding. Slightly longer nails are used for this overwalling work than are employed for new construction.

COLORFUL ASPHALT SHINGLES roof this attractive home. Note how snugly these shingles lay conforming to the studied classic beauty of the rest of the exterior.

SHINGLES can be applied either on solid or spaced sheathing. A red cedar roof provides no less than three layers of shingles over the entire roof deck, if laid correctly.

VICTORY SUGGESTION

If you desire metal gutters and they are not readily available there is no great harm to add both gutters and downspouts at a later date as they can be easily attached without any structural changes by your local sheet metal contractor.

Even gutters along the eaves can be left off, if you will lay a bed of gravel or cinders to catch the drip, and set your plants beyond the line of the roof edge.

There is no curtailment on wood shingles or asphalt roofing.

REROOFING an old house is being done with asbestos shingles right over the old roof. Note the use of the building felt which gives added protection to the roof.

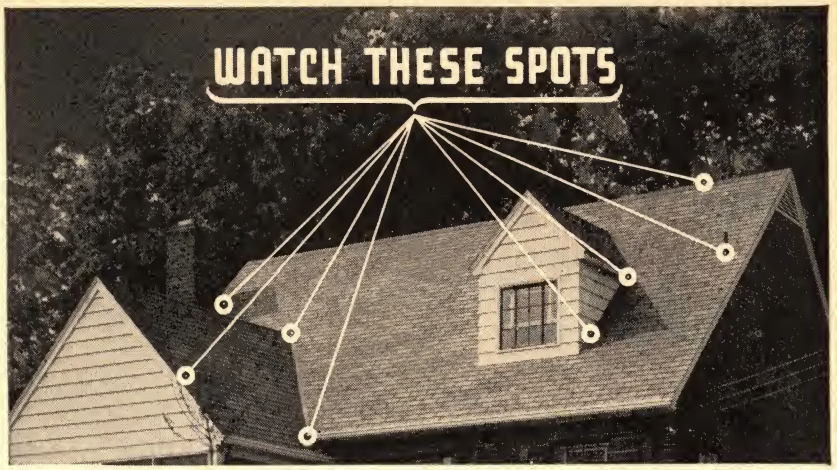
The roofs of old houses can be renewed and made waterproof by applying new red cedar shingles directly over the old roof, a process known as over-roofing. In this manner, protection is afforded the interior of the home and its contents during the application process.

The double roof which results from over-roofing provides twice the insulation of the old roof, as it keeps the temperature of the interior more constant.

Red cedar shingles come in random widths and produce interesting variations of design and texture. They can be applied in a number of different ways. For instance, some builders double every third or fourth course, thereby gaining an extra layer of shingles throughout the roof. Others apply them on irregular course lines, providing a staggered or thatched appearance which is most pleasing.

Asphalt shingles, being surfaced with mineral, are fire-retardant. They are available in a wide variety of colors, patterns and textures. Color combinations and blended roofs can be very attractive. They are highly popular.

These shingles may be used over existing roofs as described above and the same advantages apply. Strip shingles require much fewer nails than do the individual shingles—and less time is required to install them. In one installation 5,256 fewer nails were used than would have been required to apply individual shingles.



ROOFS must be maintained during the war. Non-critical materials with a minimum amount of metal may be used for flashing and other roof details to recondition old houses. This photograph, with arrows, shows the spots to watch.

Asbestos-cement shingles are somewhat more expensive. As the name indicates, this product is made of a combination of Portland cement and asbestos fibre which in its final curing becomes stone-like and has the permanency of slate.

Everyone is familiar with slate shingles. They come in two types: the more expensive is known as random slate and comes in varying thickness; commercial slate shingles are thin and comparatively inexpensive.

Burned clay shingles, often known as clay tile are particularly adaptable to the Spanish type of architecture.

Flat roofs call for built-up roofing with special installation of layers of felt impregnated with tar or asphalt. Where walking on the roof is desirable it is best to use a special composition material for this purpose.

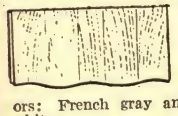
CAREYSTONE BLENDED TWINS
Asbestos-Cement Shingles

Two shingles combined in one unit for distinctive appearance at moderate cost. Wood grain texture. Fireproof, rot-proof, wear-proof.

CAREYSTONE TRI-TONE BLEND
Asbestos-Cement Strip Shingles

Five shingles in one for maximum thrift and speed in application. Individual shingle effect. Blends of green, gray and autumn. Fireproof, rot-proof, wear-proof.

CAREYSTONE SIDING
Asbestos-Cement



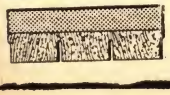
Fireproof, rot-proof, wear-proof. Painting not essential. Wood grain texture. Colors: French gray and Ducks-back white.

CAREY ROCK WOOL INSULATION

Reduces fuel consumption up to 30%; makes rooms more comfortable in summer. Available in bats, sealed roll blankets, loose wool and granulated wool, to meet all installation conditions in both old and new homes.

CAREY ASPHALT SHINGLES
Individual and Strip

Possess exceptional wearing qualities, natural beauty and fire retardant qualities. Painting not required. Available in wide range of colors including beautiful blends.



Keep your home up-to-date... **BE THRIFTY!**

REMODEL-REPAIR-INSULATE WITH Carey MONEY-SAVING PRODUCTS

With new building restricted for the duration, it is all the more important that you make the repairs in your home (or the old home you may buy) that are needed for protection from fire and depreciation—to save fuel—to provide greater comfort and convenience for your family.

The yearly savings, effected by the use of Carey Products, will go a long way in helping pay for these improvements. Carey Rock Wool Insulation will cut your fuel costs up to 30%; make your home easy to heat; eliminate unhealthful floor drafts; reduce room temperature in summer up to 10 degrees or more, insuring comfort by day, restful sleep at night. A new roof of Careystone Shingles and outside walls of Careystone Siding (both products of asbestos and cement) will give you lifetime weather protection; reduce fire danger.

Mail coupon now for valuable books.

Congratulating Themselves on Their Thrift and Foresight

John—Our fuel bill is one-third less than last year, thanks to Carey Insulation.

Jane—And our new Careystone Roof—isn't it beautiful? And just think—it will never rot or wear out . . .

John—Our Careystone Siding, too, will last a lifetime—save us money every year on paint and repairs.

If interested in repairing or improving your home, ask your Carey Dealer for literature or mail the coupon for books.

Check the items of interest to you:

- ☐ "Keeping Your Home Up-to-Date"
- ☐ ASQU Book "More Roof Value for Your Money"
- ☐ Carey Products Book "Build a Future Into Your Home"
- ☐ Rock Wool Insulation
- ☐ Re-siding
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THE PHILIP CAREY MFG. CO.

Dept. R—Lockland, Cincinnati, Ohio

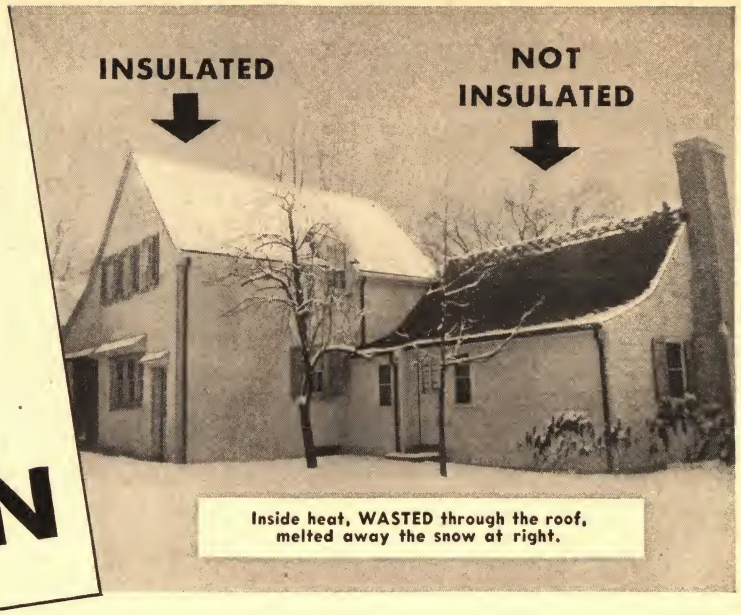
Please send literature checked—also name and address of nearest CAREY Dealer.

Name .....

Address .....

City ..... State .....

MINERAL WOOL *Full-Thick* INSULATION



Inside heat, WASTED through the roof, melted away the snow at right.

The right choice for FUEL ECONOMY • FIRE SAFETY • HEALTH *and* COMFORT • EASE OF INSTALLATION • PERMANENCE!

FUEL-SAVINGS achieved by mineral wool insulation repay the entire cost of insulation within a few years. Each ton of mineral wool used in full-thick insulation of coal-heated homes saves from 2½ to 3½ times its own weight in fuel every winter.

U. S. Government research engineers on the T.V.A. project found heat losses from uninsulated homes ranging from ⅓ to ½ of the fuel consumed, as compared with mineral wool insulated homes.

On Long Island two duplicate houses, side by side, are occupied by a mother and her daughter. One is uninsulated. The other has mineral wool in the walls and beneath the roof. It costs an average of $4.40 *more per month* to heat the uninsulated house than its next-door twin—or *MORE THAN ENOUGH TO COVER ONE MONTHLY PAYMENT ON THE MORTGAGE EACH YEAR.*

Fuel-saving, however, is only a part of the story. Mineral wool insulated houses are healthier, safer and more readily saleable.

HEALTH AND COMFORT

Family health is improved, and fewer days lost from work and school in winter, because families living in homes with warm walls suffer less from drafts and common colds. In summer the sun's heat is kept out and the house made a more comfortable place in which to live and sleep.

FIRE SAFETY

Furthermore, mineral wool insulation, being produced at extremely high temperatures, is fire-resistant and often spells the difference between a small blaze held to one room and complete loss of a home. Full-thick mineral wool in wood-lath partition, as demonstrated in tests by the National Bureau of Standards, stops the passage of fire for one hour. This makes it possible for fire-fighting apparatus to arrive in time from distant points or else enables "amateur" fire-fighters to dispose of the fire without outside help. Because of this greater fire-safety, plus the saleability and rentability of mineral wool insulated homes, many mortgage banks insist on mineral wool insulation in all homes which they finance.

Here is what the Federal Housing Administration has to say regarding the importance of Insulation:

"Owners of homes which 'leak heat' can contribute much to the war effort if they insulate and thus save fuel . . . Fuel is of vital importance to war production and the threat of a fuel shortage already is casting its shadow . . . It is unusual to call the attention of the home owner to the importance of insulation at the approach of Spring. Today, however, the home owner can get the material, as insulation material is generally available and is not on the list of critical materials. In most sections of the country he can get the workmen, although skilled labor is getting scarce. In all sections of the country he should be able to get the money under Title I of the National Housing Act.

"Aside from all this, no one knows how much the use of coal, oil and gas in the home will be restricted next Winter.

"Luxury loans are out for the duration of the war, as far as the FHA program is concerned. But loans for adequate insulation, with the consequent saving in fuel, are very much in order. Reliable dealers, contractors and others can advise home owners on what step to take in insulating.

"The use of insulation of various kinds and care in the operation and maintenance of the heating system benefit the home owner by making the dwelling more comfortable and by reducing the cost of heating. The use of less fuel lightens the heavy burden placed on the nation's transportation system, lessens the threat of a fuel shortage, and becomes a definite contribution to the nation's war-time needs."

USE THIS COUPON

NATIONAL MINERAL WOOL ASSOCIATION
Dept. SH, 1270 Sixth Avenue, New York, N. Y.

I would like a free reprint of "HOME INSULATION, An Effective Conservation and Home Defense Measure," Information Circular 7166, which was originally published by the United States Department of the Interior, Bureau of Mines.

Name.....

Address.....

City..... *State*.....

NATIONAL MINERAL WOOL ASSOCIATION
1270 SIXTH AVENUE NEW YORK, N. Y.

MINERAL WOOL HELPS PAY OFF THE MORTGAGE!

FOR DEFENSE—With America's war program causing acute housing shortages in many defense centers, it is a common sight these days to see old and dilapidated houses, such as this one, being remodeled and made livable. A good quality building paper and shingles are being applied right over the old side walls and roof deck.

Insulation IS A NECESSITY TODAY

THE War Production Board issued a Defense Housing Critical List effective February 24, 1942 limiting the heat loss of new dwellings to 66 B.t.u. per square foot of floor area or 80,000 B.t.u. per dwelling unit, whichever is the smaller. New homes will use less fuel and be more comfortable as result of the insulation. Fuel savings of $1,000,000,000 a year could be achieved by insulating the 37,000,000 existing dwellings in the United States. Thus home insulation moves from the field of being a money-saver and stable temperature luxury to an effective conservation and national-defense measure. It is our patriotic duty to conserve every cubic foot of gas, every gallon of fuel oil, every pound of coal, as our personal contribution to the War Program.

This order is a minimum insulation requirement but it is recognized as a milestone of progress in design practice and comfortable living conditions.

In a small house, the installation of full-thick mineral wool instead of the required minimum thickness will involve an average additional down-payment of only $4.60, with the 90 per cent balance carried on mortgage. The mortgage reduction and the carrying charges will amount to about 26c per month, and the additional fuel savings will average over $6 per year.

Homes, like automobiles, should be examined in the light not merely of first cost, but of upkeep as well. Even more important than the number of miles your car can go on a gallon of gasoline, is the number of days your home can be kept comfortable on a ton of fuel. With the present war program, we must conserve today so that we may live tomorrow!

A Practical Example

A test in Detroit was made of two houses: one exposed on three sides was insulated; the other not insulated was sheltered on both sides by other houses. Throughout the winter the insulated home burned 98 gallons of oil as compared with 168 gallons burned in the uninsulated home. The temperature of the insulated home never fluctuated more than two degrees, whereas in the other home it varied as much as eighteen degrees in a 24 hour period.

More Advantages

Combined with automatic heating in cold weather, insulation does away with early morning shivers, eliminates chilly drafts along the floor, and cuts down on house cleaning and decorating due to dirt and dust from overworked furnaces. Dust patterns and alternate light and dark strips along lath and beam location are less likely to occur in well-insulated homes. In the first place there is less movement of air to carry particles of dust along unevenly heated surfaces and in the second place there is less condensed moisture on the surfaces to catch dust. Moreover as cold walls are likely to be damp, condensed moisture alone may cause discoloration. In summer it may make the difference between insufferable temperatures and living in reasonable comfort. Uninsulated houses frequently are hotter than outdoors as they trap the heat on long sunny days. Incombustible heat insulating barriers in roofs and walls make even frame buildings slow burning.

In the modern home which is designed for comfort, convenience, and economy, the factors of temperature control have become highly important

FILL INSULATION is being blown into the walls of an existing house. A shingle is taken off to make a hole for the pneumatic hose and it is then very easily replaced.

INSULATION . . .

THE USE OF INSULATING BOARD SHEATHING enables the builder to take advantage of the structural as well as heat-retarding qualities of insulating board. It is easily applied.

INSULATING SIDE WALLS with flexible stitched blanket type insulation. Note how completely it covers the space between studs and how easily it can be tucked into difficult corners.

A PARTITION is being put inside the house with wallboard. This is described in the article beginning on page 37. Insulating board can be painted or papered, or can be left unfinished.

FILL INSULATION completely covers the space between joists under floors. Where it is used in walls it is poured or blown into holes left for that purpose. It is used where other types cannot be easily installed, particularly for modernization work.

CUTTING BLANKET INSULATION to correct length in advance of installing is easily done with knife, shears, or hatchet. The waterproof cover is tough and flexible so there is little danger of tearing or puncturing and thus leaving unprotected areas.

BLANKET-TYPE INSULATIONS can be easily pulled behind pipes, wiring, etc., with little hazard of tearing or puncturing and leaving unprotected areas for heat or cold leakage.

to the fulfillment of these purposes. Economy of fuel is now more important than ever. To get the most out of your plant, it is both practical and economical to install complete temperature control equipment in your home. However, to enable this equipment to function at its full efficiency, it is essential that the outside walls and roof area are insulated with the type of insulation which will perform effectively for the life of the building.

Selecting Insulation

In selecting your insulation there are several requirements that should be met regardless of whether or not air conditioning is to be installed at the same time. However, when air conditioning is used, need of insulation is greatly increased.

The primary function of an insulation is to retard the passage of heat. Therefore, the insulating material or body of the insulation must be composed of a material with a high "heat stop value" and effective moisture barrier. At ordinary inside room temperatures the air contains a certain amount of moisture vapor. With air conditioning in operation the relative humidity of the air is generally increased, unless the system includes provision for reducing the humidity. The warm, humid air from the interior can easily pass through walls of ordinary building material. If there is no vapor barrier in new construction this air condenses into water when it reaches the cold

Specify

REFLECT-O

INSULATION

in your new home.

Controls radiant heat, keeping the home warmer in winter, cooler in summer. Soon pays for itself in fuel savings. Protects against chill, dampness, and unusual weather. Economical in cost, easy to apply. Will not oxidize or corrode, but is permanent.

For additional information on the use of Reflect-O in the home or for Walk-In boxes, Locker Cold Storage, etc., write

REFLECT-O INCORPORATED
105 West Adams St. Chicago, Ill.

Build a home that's "Comfort-Conditioned" with KIMSUL REG. U. S. & CAN. PAT. OFF INSULATION

...for enduring comfort and fuel economy

HOMES insulated with KIMSUL* are truly "Comfort-Conditioned." They stay cooler in summer, warmer in winter, far more comfortable all through the year. And because KIMSUL reduces heat-losses effectively, it helps you conserve fuel for America while it cuts your heating costs.

One of the most effective insulations known, KIMSUL is composed of chemically purified, asphalt-impregnated wood fibers—materials known for durability. Low in first cost, KIMSUL also costs little to install. One man can usually do the job! Once installed, KIMSUL won't sag, sift or settle.

You'll enjoy years of better living in a home that's insulated with KIMSUL. And should you ever decide to sell, you'll find that KIMSUL-insulated homes are considered more modern, bring better resale prices.

Facts you want to know about KIMSUL are given in a new booklet, "The Comfort-Conditioned Home." Mail coupon now for your FREE copy.

*KIMSUL (*trade mark*) *means Kimberly-Clark Insulation.*

KIMBERLY-CLARK CORPORATION
(Established 1872)
Building Insulation Division
Neenah, Wisconsin SHG-142

Please send free illustrated booklet "The Comfort-Conditioned Home."

*Name*_____

*Address*_____

*City*_____ *County*_____ *State*_____

INSULATION . . .

THIS INSULATING INTERIOR WALL and ceiling finish in soft, warm colors adds charm to the room. This type of interior finish is easily cleaned and is usually fade-proof.

MODERN FIBRE INTERIOR FINISH tile, plank and wainscot with pre-decorated wood moldings make this basement playroom an inviting rendezvous. This type of wall and ceiling finish reduces the transmission of disturbing noises.

WASTED ATTIC SPACE is easily and economically changed into a useful and comfortable "extra" room. The wood fibre interior finish will help keep this room cooler in warm weather and make it easier to heat in cold weather.

outside wall. Insulation in existing houses does not cause trouble if normal relative humidities are maintained. Besides the moisture barrier, ventilation within the walls can be provided for by leaving air spaces in front and in back of the insulating material. It is important that attic space should be ventilated above all insulation in any new or existing houses.

Types of Insulation

There are several types of insulation on the market today which have proved their value. Among them are the *rigid board* type, the *flexible* or *blanket* type, the *batt* or *sectional* type, the *fill* or *loose* type and the *metallic sheet* type. Each of these has its advantages, whether it be because of its physical shape and thickness or because of its very lack of bulk and weight, and each of them should be carefully considered with regard to its application to the particular kind of house you are building or remodeling.

The *rigid board* type, generally called *insulating board,* is manufactured of vegetable fibres, principally wood or sugar cane. These boards are literally sheathing "lumber" coming in panels which can be nailed on the outside or inside of exterior walls and on structural floor members.

Flexible insulations, often known as *blankets* or *quilts,* are made from mineral wool, wood fibre, and animal hair which are usually fire-, moisture-, and vermin-resistant. These matted or felted fibres are generally encased between sheets of heavy building paper and stitched or cemented together. Thus, they may be installed by tucking between studs, joists or rafters, and nailing thereto.

Fill insulations, usually come in "batts" of the same general composition as *flexible* insulations and may be conveniently placed between studs and joists. These *batts* are really "pieces of blanket" made up of mineral wool with waterproof building paper on both sides. They are bought 1, 2, or 3 inches in thickness and placed between the structural members of walls, floors and roof. Sometimes granular or nodulated types of *fill* insulations are "poured" or "blown" between the structural members. *Fill* insulation also comes in the form of loose wool (mineral product) which may be packed between studs or joists or blown in.

Reflective type consists of bright metallic foil or sheets (steel or aluminum) and coatings which may be brushed on like paint. Bright foil is cemented into a sheet of paper or sometimes a wallboard. *Reflective* metal sheets are nailed in place between studs. This type increases the value of air spaces by trapping heat transferred by radiation. Clean metallic surfaces usually are good reflectors and poor emitters of radiant heat.

Interior Insulation Board

Originally this board was supplied in large plain sheets having no definite color or finish. It was a crudely made material used for temporary partitions, wall and ceiling coverings for storage space, and in places where appearance

A BLANKET of mineral wool, held by wooden strips, ensures warm floors for demountable houses without basements being constructed in War Production areas.

did not matter. Within the past few years insulation board has been developed into a fine-textured interior finish in a variety of patterns in soft, harmonious shades. This fibre board can be used in new construction or applied right over old cracked plaster for redecorating work. It is economical to apply and has remarkable sound control qualities.

Protection of Openings

The 40 per cent infiltration and heat loss normally chargeable to unprotected exterior openings may be largely eliminated. As far as exterior doors are concerned they are usually sufficiently heavy and weatherproof so that only proper weatherstripping is needed. With the windows—first, be sure you buy good windows which will not shrink and ultimately allow the passage of drafts: second, insist on weatherstripping. In the colder climates, *double-glazed* windows or storm sash should be used.

These stop a surprisingly large percentage of the heat loss through glass in winter. They cost very little, but it is well to specify a good quality clear glass so that vision will not be impaired. Double glazing also reduces fogging and condensation on windows.

Many people overlook the importance of good building paper in planning a new home. No building material is perfect—stucco is porous—so are bricks and the mortar holding them together—and lumber shrinks. Thus efficient building paper is needed to act as a barrier against air infiltration and dampness over the house and around window and door openings. Be sure the building paper you buy will have long life, is waterproof and windproof, and is tough and strong enough to stay in place without tearing.

Acoustic Values

Are you aware that a house whose walls are insulated becomes a quiet and peaceful one? And, no matter how the wind may blow outdoors, you have a feeling of security from the blast. Sound that originates in a house is generally carried from floor to floor in the hollow walls but walls filled or covered with insulation material deaden any noise.

The difference between an insulated home and an uninsulated one is exactly the difference between an economical and an extravagant home. It is one of the greatest improvements in modern building practice. Insulation is simply some form of barrier which will prevent the escape of heat you have paid for developing, and at the same time to exclude the summer heat that pours down on the house.

Home builders who are about to select insulation for their new homes must remember that the material which they select must perform its duties for the life of the building. To assure them that their home will be cooler in summer and warmer in winter, and that their heating and cooling system will operate at a savings, the insulation they choose must be protected against these elements which lower its efficiency. A quality material will pay for itself.

One afternoon's work...
gives us a cool house all summer; cuts our winter fuel bills $35 to $40

We wanted to save money for ourselves; we wanted to save fuel for our nation . . . *so we INSULATED WITH ZONOLITE and achieved both!* Besides, we enjoy much better health now that we can maintain comfortable inside temperatures all the year around.

. . . we insulated our entire attic ourselves . . . all in just 4 hours

41 bags of ZONOLITE supplied the complete job. These covered the full ceiling area of our 28-by-25-ft. house. We carried them to the attic, poured their contents between the joists, then leveled it off to a uniform depth of 3 inches. It was just that simple and easy. There was no muss, no waste. Practically our entire cost for the ZONOLITE was returned in our fuel savings the very first winter. Now we're going to insulate our outside walls and cut next winter's fuel bills even more.

ZONOLITE, as a *poured-in* material, is the easiest of all insulations to install—either by the home owner himself, or by the professional contractor. It packs as it pours, and being a 100% inert mineral product, it never deteriorates and is practically non-settling. Zonolite is one insulation that is absolutely proof against fire, rot, insects and vermin. A thorough insulation of your own home with Zonolite will cost little; and can easily reduce your fuel bills by 30 to 40 per cent *every year!*

Ask your Building Material Dealer about ZONOLITE *today!*

ZONOLITE
TRADE MARK REG U.S. PAT. OFF.
PERMANENT AS THE EARTH ITSELF

UNIVERSAL ZONOLITE INSULATION CO.
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Please send me your new free booklet, "The Modern Miracle of Insulation."

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. . . Windows . . .

WELL-PLACED, clear-paned windows provide frames for the lovely scenes of this world, the changing beauties of the four seasons. The autumnal foliage and storms; the winter snows and sunlight; the ever-amazing green of spring; the relaxing warmth of summer, are all mirrored in your windows.

Windows furnish you with light. All of us have known the depressing effect of entering a room where a lack of window space has made a dark and gloomy appearance. The best of furnishings and artificial light cannot substitute for the bright, natural look adequate windows give a home.

Windows, too, provide you and the members of your family with the fresh air you need when you are indoors. And, thanks to modern engineering methods, the air is controlled so that it does not disperse itself throughout the house in chilly drafts, as was the case with the old type of windows when sash and pane failed to meet.

Modern windows are responsible not only for greater beauty within and without the home, but for healthier living conditions.

Window Selection

When planning and building your home, you cannot underestimate the importance of good window-placing and construction. Architecturally, windows are an integral part of your house, and as such, manufacturers can furnish you with completely equipped windows, ready for installation.

A reliable dealer is of supreme importance in helping you with your selection. You can place your confidence in his ability to recommend durable, lasting, and practical openings. His knowledge of up-to-date window building is at your disposal, and your problem is one he can meet with efficiency and ingenuity.

Types of Windows

The double-hung window, the casement window, and the sliding window are the three basic types from which you can make your selection, but the different adaptations of these types offers you a wide range for your particular housing problem.

Those windows which slide up and down in their frames are known as double-hung windows. The casement variety is that which is hinged at the side like a door, and swings out from the exterior of the house. Sliding windows operate on tracks or runners and open by sliding from side to side of the frame.

Windows may be of metal or wood, the choice rests with you and the architectural requirements of your home. If they are of wood, the stock from which they are made is seasoned and selected. The mitred joints are tight, and will withstand strain without crevices. The glass has been bedded in putty, not merely set in the sash, with a bevel of putty over it. The surface of the wood has been sanded and is prepared to take paint in a proper fashion.

If the windows are metal, they are made of processed steel, aluminum or other alloys suitable for the purpose. These are now on the restricted list.

Where to Place Them

The old method of placing windows in a house to achieve perfect balance on either side, has fortunately, for originality and variety, disappeared. Good taste and imagination can place windows in interesting and unusual positions. Some rooms in a house are literally "made" by a grouping of windows, a corner opening, or a bay window which perhaps includes a comfortable window seat.

Remember that windows can be arranged to provide the right areas of wall space for your furniture.

The Architecture of Your Home

While the manufacturer is very much concerned with the functional aspects of his products, such as tightness and snugness of construction, he is also extremely flexible about carrying out your ideas of appearance. Perhaps, your home is of the English type, and

GLASS BLOCK PANELS are inexpensive and don't take up precious wall space in a small room. Such panels can be installed in existing homes to give added light.

DOUBLE HUNG WINDOWS bring in plenty of light and air over this kitchen sink. Pots of flowers and printed curtains add color and charm to this work center.

CASEMENT WINDOWS are interesting features in any house. They can be obtained in wood or steel. Be sure to examine the casement hardware which operates them.

a many-leaded reproduction of the casement window found in old English dwellings would enhance its charm—you can obtain it, plus the modern advantages of window engineering. An American Colonial home would benefit by double-hung windows, with twenty-four small panes, the type found in early New England residences. The simplicity of a sliding window seems particularly appropriate to a modern-style home.

You need not have the same type of window all through your house. A

LARGE WINDOWS let in plenty of sunlight to make this an attractive nook for study or writing and a miniature conservatory.

combination of the three types can be used to distinctive advantage. And this idea is absolutely sound architecturally and decoratively.

Your architect or your builder, plus your own good taste, can dictate the style of window you want and need.

Decorative Value of Windows

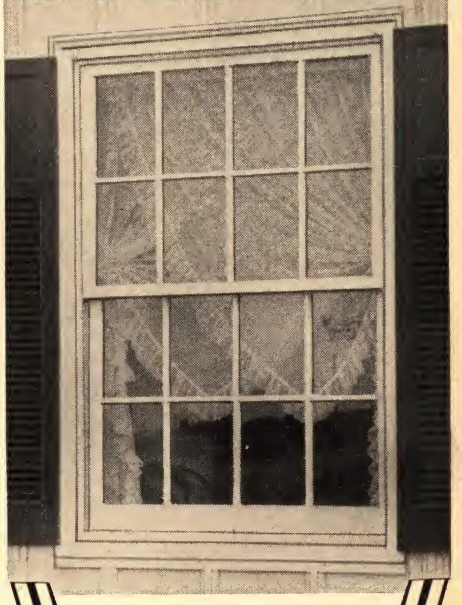
Remember that good windows will do justice to your pretty draperies. They can be equipped with glass shelves, on which you can place bright bottles, or bric-a-brac, a sunlight, exposed whatnot! Or flowering plants can grace them to picturesque advantage. Trailing ivy looks charming hung in a window. And in the warmer months, flower boxes are delightful decorations for your windows.

But aside from the ornamental value of your windows, they are important in the economy of maintaining a house. Snug air-tight construction means a real saving in your fuel bill.

Weather Conditioning

Weather-stripping is what insures your windows' snugness against the elements. Some manufacturers, faced with the elimination of critical materials required for our national defense, have devised new weather-

YES, YOU CAN HAVE GOOD *Windows* IN SMALL HOMES!



Insist on the new *Andersen* VICTORY DOUBLE-HUNG WINDOW UNIT

Only 13 ounces of critical metals in weatherstripping and counterbalancing

- LOW PRICED!
- WEIGHT BALANCED!
- OPERATES EASILY!
- LIFETIME QUALITY!
- DELIVERY ASSURED!
- SEALED—IT'S WEATHERTIGHT!

SEND COUPON TODAY!

Andersen Corporation
Dept. SHG-42, Bayport, Minnesota

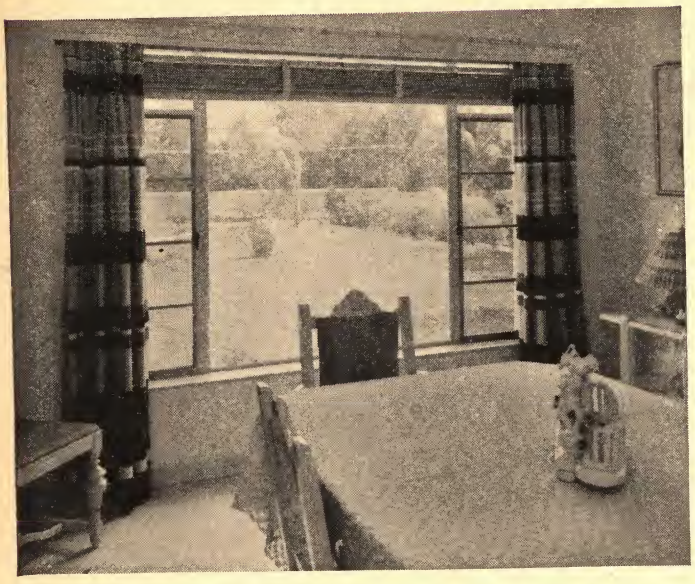
Gentlemen: Please send me information on your new Victory Double-Hung Window, as well as useful window ideas I can use in my new home.

Name_____

Address_____

City_____ State_____

WINDOWS . . .



THIS PICTURE WINDOW is so-called because it emphasizes the view outdoors. Its spaciousness permits much daylight and air.

stripping processes. One of these, a pressure strip of treated hard maple, provides a tight seal, with easy sash operation.

The double-glazed sash is a most convenient asset. This unit contains two panes of glass within its frame, which makes it a storm sash, as well as a window. A variation of this unit has a separate frame, which is a screen, and another which is a second frame. Either one can be snapped into the unit, and you can have screen or storm sash, as you wish.

Clever hardware devices have taken away the old problems attendant on twice-a-year screen and storm-sash adjustment. The above-mentioned unit, which requires only a push to snap the frames into place, proves the ease with which modern window hardware works. Casement windows used to open by means of a rod, which was often difficult to make secure. This unwieldy process has been replaced by angle-drive operators and half-surface operators, which enable a full opening or a mere crack.

Window hardware insures easy control of the sash, and it must be durable enough to face weather conditions and long wear. For these reasons, good hardware is necessary, if you want the most satisfaction from your window equipment.

Modern windows have been improved by the elimination of the old-time weights, cords and pulleys. Spring balances, long springs whose tension provides the energy once given by weights, have replaced the old system of window-building.

Thanks to modern engineering knowledge and procedure, the old struggles of raising and lowering windows, the problem of drafts, the storm-sash and screen tussle, belong to the past. Your windows are a real convenience and asset to your home.

NEW AND BETTER WINDOWS THAT SAVE MONEY

NO OTHER WINDOW OFFERS ALL THESE ADVANTAGES!

MORE DAYLIGHT LARGER GLASS AREAS

BETTER VENTILATION FROM 3 DIRECTIONS

EASY OPENING NO STICKING

SAFE WASHING FROM INSIDE

SCREENED IN A JIFFY—SAFELY

STORM SASH COSTS LITTLE

Think of having the *double* window *beauty* pictured above and below, plus the *modern* window *conveniences* sketched at the right—features never before available at low cost.

Now you can be *certain in advance* that your windows are of high quality, are properly fitted, and are correctly installed. The new Fenestra Package Window comprises a high grade Steel Casement, Bonderized for rust prevention; Glass and Glazing; Casing and Outside Trim of California Redwood—all accurately assembled, delivered complete; Bronze-Finish Hardware included. Your builder installs it *right,* in a jiffy, using hammer and nails only . . . You save 3 ways: in first cost, in installation cost, in upkeep cost. Get the facts, judge for yourself. Mail the coupon.

Fenestra

PACKAGE WINDOW

Detroit Steel Products Company
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2271 East Grand Blvd., Detroit, Mich.

Please send me the FREE Fenestra Package Window Catalog.

Name_____

Address_____

City_____ State_____

DO's and DONT's on HOME BLACKOUTS

Don't Be Panicky

Many avoidable accidents can occur during blackout practice if you lose your head. Be calm and ready at all times so when the "alert" sounds you can proceed efficiently to carry out instructions. During a real blackout (should there be one) don't use your phone. Telephone operators will be busy on important work.

Don't Pull the Rugs Up

You won't need them to blackout your windows if you find out how little it costs to get real blackout materials. Instead of an upset house and heavy, oppressive rugs at the windows, you can buy blackout window shades for as little as 50c a window. Women use them like any window shade and save the work of putting the house back together when blackout practice is over.

Don't Sit Around in the Dark

A half hour of blackout practice seems like an eternity if you have to turn off the lights. It's not so good for morale, either. You won't worry so much about Junior when you can keep your eye on him and know he isn't going to knock over tables or lamps and get himself hurt. With opaque blackout shades you can read, smoke and enjoy normal comforts.

Do Fix a Comfortable Blackout Room

Many people have found the kitchen works best. Move in comfortable chairs and be where you can get a drink of water or have a leisurely snack if you should want it. Keep matches, candles and flashlight handy in case anything should happen to the electric power. You can use these without disturbing blackout procedure if you have blackout shades installed.

Find Out About the Efficient Blackout Shades

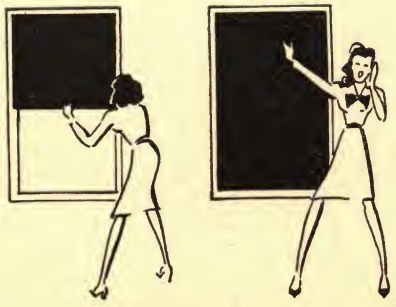
Many west coast housewives were amazed to find that A. R. P. (Air Raid Precaution) blackout shades were available in so many stores. Your nearest 5c to $1 store probably has them—as well as your local hardware or variety store. For 50c to $1 they come complete with hold-down brackets for window frames and sills.

Do Learn London's Lessons

Remember, during the early air raids in London, carelessness often caused more casualties than the raids themselves. Be careful. Follow your block warden's instructions to the letter. Don't raise your blackout shades until you hear the "all clear." Having blackout shades at your windows will eliminate necessity for matches or candles except in a power cut-off—and help cut down fire hazards.

Do Get Ready Now

One desirable thing about these blackout shades is that you can install them over your regular shades and roll them up out of sight. It takes only a few minutes to install the hold-down brackets that keep shades from flying up or blowing away from sills. Or you can get, for only a few cents extra, blackout frames of fibre that make a lightproof frame around windows, similar to a type found so practical in England.



MORE COMFORT at LESS COST

You're way ahead in comfort and money when you use Rusco Victory Triple-Service Windows instead of old-fashioned screens and storm sash. Made especially for Victory Homes, this new unit combines a tightly fitted adjustable metal closure with removable screens and Libbey·Owens·Ford glass panels. And you can change from winter protection to summer screens in 30 seconds, all from the inside.

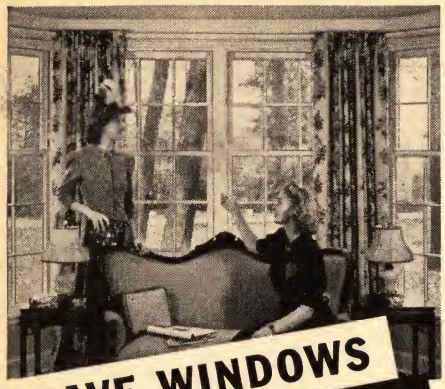
Look at these plus advantages:

1. More comfort, winter and summer
2. Quickly changed, easily stored inserts
3. Rainproof draft-free ventilation
4. Freedom from steamed, frosted windows
5. Quieter home
6. Panels washable at sink
7. Freedom from window drafts
8. Greater window protection
9. Attractive appearance
10. Fuel savings—30% to 40%
11. Profitable permanent investment

Rusco Victory Windows will last a lifetime. They're made of fine white pine, protected with Woodlife against moisture and termites, and two-coat painted. Because they use noncritical material, they're ready for delivery, and we'll prove that they pay for themselves in fuel and other savings, especially at the new low price.

Ask us for free details and estimate on Rusco Victory Windows or on Rusco All-Metal Triple-Service Windows, still available in limited quantities. The F. C. Russell Company, 1836 Euclid Avenue, Cleveland, Ohio.

RUSCO
TRIPLE-SERVICE WINDOW



HAVE WINDOWS THE WAY YOU *Want them!*

See How Easy That Is in Any Size or Price Home!

You can have windows the way you want them. Provide the light and air you want, whether you're building or remodeling. You can have "trouble-free" *Curtis Silentite "Insulated" Windows* in any size, style or price home.

Save on housework! Save money! Silentite helps you do both. It keeps out dust and dirt, it keeps heat in—helps you save fuel. Some owners report fuel savings up to 25%.

Whether you're building or remodeling, you want the kind of windows that won't mean headaches. That kind is Silentite—the "Insulated" Window.

● Your Curtis Dealer can prove the economy of Silentite Windows. *Get our free book.* If you live in Canada, write to W. C. Edwards & Company, Ltd., 991 Somerset Street, West, Ottawa, Canada.

1866 CURTIS WOODWORK SILENTITE PRE-FIT the "*Insulated*" window

CURTIS COMPANIES SERVICE BUREAU
Dept. SH, Curtis Bldg., Clinton, Iowa
Please send *free!* Silentite Window Book, showing all types of today's windows.

Name.....

Address.....

City.....*State*.....

CURTIS WOODWORK IS SOLD BY RELIABLE DEALERS EVERYWHERE

Woodwork . . .
FOR CHARM AND BEAUTY

WOODWORK is the backbone of a home's charm. Its architectural design forms the background for furnishings and decoration. As a permanent part of the house, careful consideration should be given to its selection and quality. Whether you seek period charm or simple dignity, you can find well-fitting doors, frames, windows and trim at your local lumber dealer. Get him to help you select the correct architectural woodwork for every room in the house. Good woodwork mellows with age.

Choose Doors That Say "Welcome"

An attractive entrance makes even passers-by see your house as a home. The Colonial entrance has a number of variations. It can have the six-panel door—or it can have a small glass area to admit light where there is no porch. Doors with a larger glass area to admit light into hallways and entries are suited to entrances shaded by porches. The frames may be straight, arched or triangular, either plain or carved.

Then, as callers step into your entrance hall, they gain their first impression of the inside of the house. A well-planned hallway or vestibule should be large enough to permit your guests to step inside out of the weather quickly. It should limit to some extent the view into your living room. Beautiful doors complement the architectural style of your home and keep a small hall from being dull and drab.

Convenient for Your Guests

A closet near the entrance for wraps and overshoes is a most valuable aid to convenient hospitality. Where stairs rise from the entrance hall, a closet may be located beneath them. The closet may form one side of the hall and thus help define the entrance area.

Woodwork in your 18th Century living room can have a beautiful mantel as a focal point flanked by book shelves and cupboards. French doors opening out on a terrace make the room lighter and more cheerful. A modern room should have doors that are flush and large windows carefully placed.

Windows Are Important

Windows always make a greater contribution to a room's beauty if the sills are slightly below the eye level of persons seated. Where several windows are used along one side of a room they should be located close together, so that they may be treated as a unit. The dining room or dining alcove which is a part of the living room with plenty of windows is attractive enough to make every meal a pleasure. By proper selection and use of different decorative treatment, the room may seem to change its character with the seasons. For example, large windows and French doors framed in gay chintz make the room seem a part of the summer garden. In winter curtains and heavier drapery help soften and subdue the landscape. The dining room should have at least one corner cupboard.

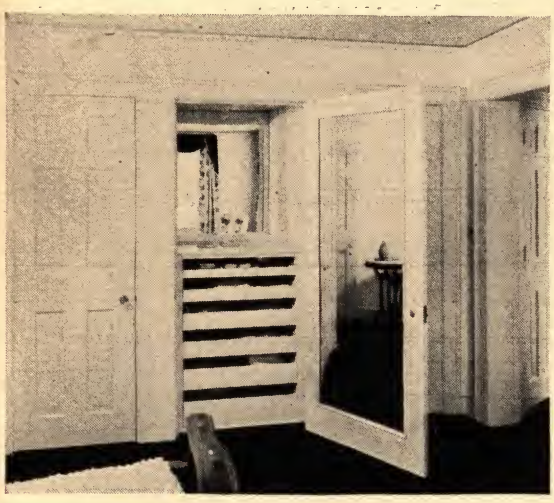
COLONIAL ENTRANCES—doors and frames complete—are a few of the standard stock items which you can purchase at your local retail lumber dealer's showroom.

For bedrooms there are louver or slat doors to connect bedrooms, or bedroom and porch. They aid in ventilation. A window seat with storage space underneath, and built-in end cupboards for your glass or china collection and plants, takes little space and adds greatly to the individuality of the bedroom. Wardrobe and storage closets with three sliding flush doors are more convenient than doors that open out.

A double-acting door to connect the kitchen and the dining room is the first

must. Plenty of cabinets with counter space and storage cabinets above are also essential and add measurably to convenience. Wherever possible the sink should be under the window and be sure that it can be opened easily.

The manufacturers of nationally guaranteed woodwork have modern production methods and create stock woodwork of the highest quality. A wide selection of doors, windows, stair rails, cupboards, closet trays and drawers, window seats, and cabinets to make your home charming, is stocked by your local lumber dealer. Let him help you select the woodwork that will be most appropriate to your interior plan. Also manufacturers will be glad to send you their catalogs. ★



MORE USABLE WALL SPACE, more character for both living room and dining room are gained through these attractive stock cabinets.

TO SAVE SPACE in a small bedroom this closet is used as a chest of drawers and also serves as a dressing table.

BUILD BEAUTY IN THAT HOME OF YOURS WITH WESTERN PINES*

It's surprising what you can accomplish on a limited budget when you build your home with Western Pines. The exterior will always be a source of pride and the interiors will radiate charm and livability that every home owner wants. Western Pines are so versatile—so responsive to the work of the carpenter and painter—that *lasting* beauty is assured. Remember, there are no defense restrictions on the production of Western Pines. In order that you may become familiar with the unusual qualities and economy of Western Pines, mail the coupon for your free copy of the profusely illustrated book, "Western Pine Camera Views," 1942 edition.

Cheerful, compact, convenient is this kitchen with paneling and cabinets of Western Pines.

Simple, practical, and mighty livable. A n- treatment of Western Pines in a boy's bedro

*Idaho White Pine *Ponderosa Pine *Sugar P

THESE ARE THE WESTERN PINES

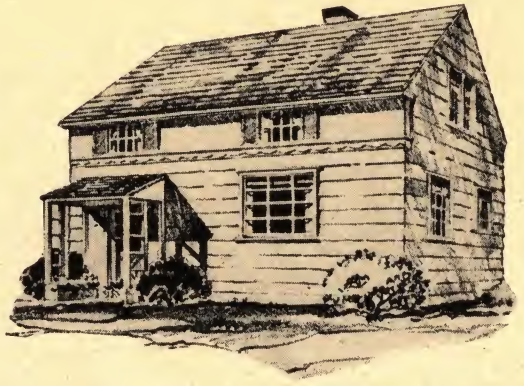
Quality Hardware . . . A GUIDE IN ITS SELECTION

When you are planning your home, the question of hardware should be given paramount consideration. Good building practice dictates that two percent of a home's cost should be allowed for hardware. It is important that you buy the best hardware you possibly can, not only for your own security and satisfaction, but, because, at a later date, should you wish to sell, first-class hardware enhances the resale value of a residence.

There are, of course, cheaper makes of hardware on the market, but replacement is costly, and you will find that the reliable manufacturers' grades of hardware are the best investments.

Hardware made of plastics and similar materials is an exciting new feature. Enduring and handsome items in these materials offer you a variety of advantages: color, durability, ease in operation. We describe all of these points for you in this article.

Hardware has been called the jewelry of the home. But unlike jewelry, it serves a very necessary and functional purpose. It not only should be good-looking, but it should be practical.



Editor's Note: Homebuilders seldom realize how much locks and latches contribute to the security, comfort, and pleasure of a home. Revealed in this article are the qualities experts look for, which should prove helpful in the selection of good hardware for the home you are planning.

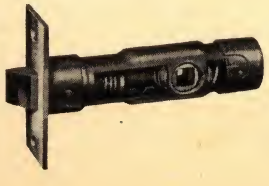
Fulfilling the two functions of usefulness and decoration as it does, hardware should be carefully selected.

Protection Its First Value

Your first consideration of hardware should be the locks for the front door, grade and rear doors. These outside door locks are the barriers to intrusion and should afford the maximum of locking security. The finest commercial lock available is known as the 5 pin tumbler. However, these are often confused with the 5 disc tumbler which offers far less security. Number one—make certain your locks have 5 pin tumbler cylinders. And for convenience, have them keyed alike, that is, one key operating all the locks on the outside doors.

Carefree Dependable

Latchsets for interior doors should be selected with a thought to their functional qualities. Do not just pick a pattern that pleases, but first make sure that the operating unit is rugged and dependable. One leading manufacturer is now endorsing his line with a life-time warranty. However, the features for are shown in the cutaway . Note that the unit em- springs. One applying upon bolt and a heavier spring retracting mechanism. This ts a cush- n to and osi- ac-



Examine Details

Details count. Make certain the line you select is complete, having latches designed for each door. The bathroom latch should be equipped with a pass key to provide an emergency means of opening the door. Closet sets should have one knob outside only, a turn knob inside. By the selection of a complete line you receive the most for your money, effecting every possible saving and economy.

"Eye Appeal"

You are now ready to consider the line with a thought to beauty. The old idea of period design is a thing of the past. Choose the pattern that pleases you, for you are the one to live in the home. However, if you are undecided, you're always safe in selecting round rose trims. Today, most lines are available in all steel-trims, glass knob, or plastic trims. There is much to be said for the virtues of metal trims. But the plastic is becoming ever more popular —this is the plastic age. The range of colors and the inherent qualities of plastic go far to recommend them. It is definitely a matter of choice.

A survey of manufacturers' catalogs, plus the advice of your builder and dealer, will enable you to make the right choice of hardware for your own home.

Even with the restrictions on metal, you are permitted a good selection in hardware. Plastic materials are particularly well adapted to take color, so you can carry out a color scheme which will accent your house in an unusual and effective manner. Too, because they are non-metallic, plastic hardware

STEEL CELLAR DOORS

Outlasts the home!

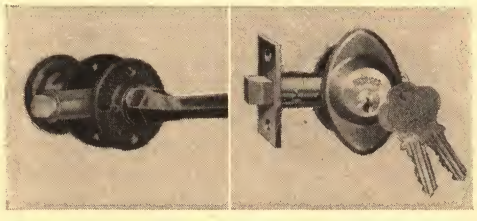
SAFETY

In WAR or Peace!

...cement ex-

appliances will not corrode or rust from weather or atmospheric conditions. These plastics are durable and require no care—an important factor in housekeeping! All the skill available has gone into the making of these plastics so that they will give sustained service over the years. Plastics are being used in many fields today, and their value is being confirmed daily! Emergency and necessity serve their purpose in that they create new materials for use in our everyday life.

Interior hardware is just as important as that used on the exterior of your home. Cabinet doors which won't



remain closed and locks that fail to latch properly can cause a great deal of annoyance. Smooth operation is of prime importance in hardware.

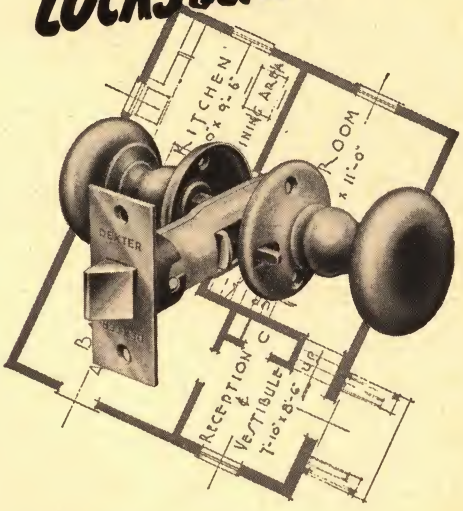
Saving Via Installation

No article would be complete without a word about installation. Here careful consideration should be given to the benefits of tubular type latches. Their installation is via the "drill-hole" method; the door is made ready by merely boring round holes. Deep mortising as is necessary on other type units is entirely eliminated, saving about two-thirds of the cost. This saving is reflected not alone in reduced overall costs, but saves vital time, permitting the carpenter to accomplish much more work. Tubular latches are carried by leading retailers throughout the country and are but briefly illustrated here.

All in all, good hardware can be a real contribution to your living comfort. Devices which involve constant fixing and attention can soon be a drain on the physical energies. If your home is to be the day-to-day source of happiness it should be, you want to investigate all the details, such as hardware, which add up to a complete, well-run and functioning place for you and your family to live. The extra time spent at first in making selections will pay you well!

CERTIFIED TO CONFORM WITH FEDERAL SPECIFICATIONS ON DEFENSE HOUSING

DEXTER-TUBULAR LOCKS & LATCHES



LIFE-TIME WARRANTED . . .

Here is predetermined lock and latch value for you. Certified—to meet the approval of Federal Agencies on Defense Housing. Warranted—to give you satisfactory service. Write for facts.

DEXTER "DRILL-HOLE" SAVES ⅔ INSTALLATION COSTS

Requires no deep mortising, merely bore round holes—saves money and time of carpenters. Dexter "Bit-Guide" technique eliminates all chance of error. Directs boring straight and square.

WITHOUT OBLIGATION SEND

Your Free Book

TELLS YOU
How to expertly select locks and latches. Explains Life-time Warranty, Dexter "Drill-Hole" and "Bit-Guide." Complete data on Victory Home.

NATIONAL BRASS CO., GRAND RAPIDS, MICHIGAN

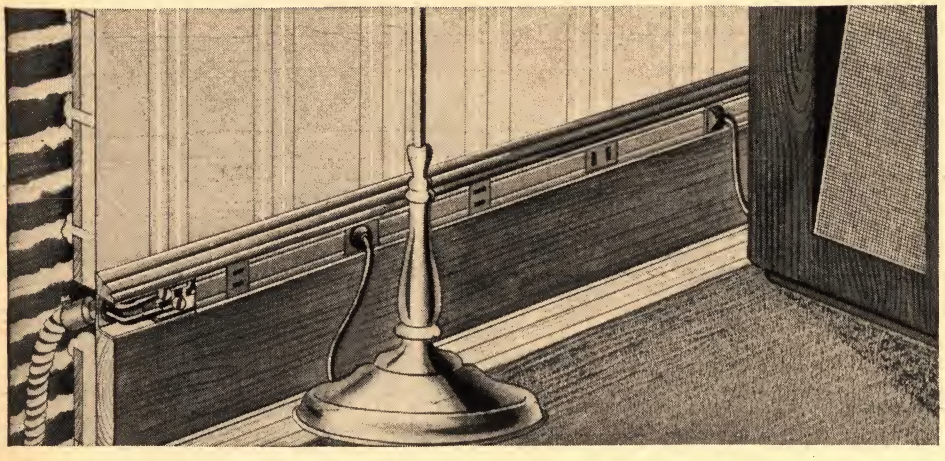
Gentlemen:
Without obligation, kindly send me your free book as described above.

Name.....

Address.....

City.....State.....

Wiring: FOR TODAY . . . FOR TOMORROW



MAKING PROVISION in your plans for the inclusion of outlet strips is an excellent way to be assured of having all the convenience outlets you will ever need.

ELECTRICAL equipment and appliances can operate successfully only when they are served by a good wiring system. Smooth and economical home management depends upon adequate wiring. Heavy wires should be run from the main panel to branch panels with fuses or preferably circuit breakers, located in convenient points about the house. Branch circuits of smaller-sized wire should run from these branch panels to outlets. This type of layout protects current from losing pressure and provides efficient operation of appliances, motors and lights. Outlets and switches should be located for the convenient use of appliances and lamps.

Today, due to war conditions and the need for conservation of metals, the amount of wire and the number of outlets for each home have been limited. See the box on opposite page with the number of outlets for each room.

The National Standards of Minimum Wiring Adequacy were developed to give owners and builders a yardstick by which to measure the "Electrical Efficiency Quotient" of their homes. Today, these standards offer a yardstick for planning—to help insure the future value and livability of the home now being built.

Standards of Minimum Adequacy

Lighting: A central ceiling unit in each room, except lavatories and small bathrooms.

Supplementary lighting over each work center in kitchen and laundry. Same on either side of bathroom mirror and in other rooms, as desired.

Lights at head and foot of each stairway; a light for each large closet, with door switch or pull.

Lights at each house entrance (preferably two.)

Switches: Wall switch, to control chief unit, in each room and hall, located at main doorway (rooms having two or more doorways over 10 feet apart require switch at each doorway); other wall switches to control stairway lights, separately, from both head and foot of stairs; from foot of attic stairs; from top of basement stair.

Outlets: On Lighting Circuits. Convenience outlets so placed that one is accessible within 6 feet in either direction from any point along the wall (at least one in every useable wall space over 3 feet); one outlet for each hallway over 10 feet long; one in bathroom (located away from tub); one in basement; one in attic space.

On Appliance Circuits. One convenience outlet at each kitchen and pantry work center, located at counter height; additional kitchen outlets as needed to serve clock, refrigerator, ventilator fan, dishwasher-sink, garbage disposal, et cetera; at least one in each dining room wall space which would accommodate serving table or buffet; one at table height in dinette or breakfast nook; one at each laundry work area, including one conveniently located for washer, ironer et cetera.

Circuits: A lighting circuit for each

For the

VICTORY HOME!

Victory Lighting Should Be Cheerful Lighting

This artistic fixture gives that close-to-the-ceiling effect that most women prefer and that is recommended by lighting authorities . . . . *and cheerful light aplenty.*

BEDROOM DESIGN No. V-912
One light-12″ Diameter
Finish: Ivory With Crystal Highlights
MODESTLY PRICED

Send for completely illustrated four-page folder showing other desirable and up-to-the-minute designs.

JOHN C. VIRDEN CO.
5009-6103 LONGFELLOW AVENUE, CLEVELAND

VICTORY SUGGESTION

Allow 1″ between the top of the baseboard and the base moulding so that an electrical plug-in strip may be added at a later date which would give you plenty of convenience outlets. Use a drop cord from the ceiling if you cannot get the kind of lighting fixtures that you desire now. These two suggestions will get you under the restrictions and yet provide for the addition of these extra convenience outlets and electrical fixtures when they again become readily available.

500 square feet of finished floor area (outside measure).

Appliance circuits of at least number 12 wire to convenience outlets in dining room, pantry, kitchen and laundry. Special purpose circuits to major appliances such as oil burner, range and water heater.

Main Service Capacity: Four-room homes require three number 6 main service wires; five-room homes or larger require three number 4 wires. Spare terminals in distribution center to provide for future additions to wiring circuits.

Extract from
DEFENSE HOUSING CRITICAL LIST

Conduit fittings and wiring devices are limited to the quantities found necessary by the applicant to provide for eligible number of outlets to be installed for switches, lighting fixtures, and convenience outlets. The number of such outlets for each dwelling unit that is eligible for priority aid shall not exceed the sum total for the dwelling unit calculated as follows:

	Rooms	*Outlets*
a.	Bathroom	2
b.	Kitchen	4
c.	Dining room or dining space	3
d.	Living room	4
e.	Each other habitable room	4
f.	Each private hall	2
g.	Each private foyer	2
h.	Each exterior entrance	1
i.	Utility room	3
j.	Basement	
	In dwellings without utility room	5
	In dwellings which have a utility room in addition to a basement	3
k.	Garage	
	One car	2
	Two car	3
	Multi-family	2 for each enclosed car stall.
l.	Other areas, including public stairhalls, service spaces, etc.; number to be determined for individual case.	
m.	Special purpose outlets for ranges, refrigerators and for heating, ventilating and plumbing appliances, and equipment; number as determined for the individual case by the office processing the application. (Where house is piped for gas range outlet is not eligible.)	

Note: the following items each count as one outlet: switch box—combination switch and convenience outlet—duplex convenience outlet—outlet for permanently installed fixture — special purpose outlet.

Care exercised now, in planning house wiring, will fulfill the double responsibility which you assume with your Preference Rating—that of building the best possible dwelling now, while providing a plan for the future, to be fulfilled when materials are once more available without limitation. Your architect or builder can help you cooperate with government by conserving all possible copper in your present wiring installation, while providing for future wiring expansion at a minimum of trouble and expense. In so doing, you can look forward to a high "EEQ" for your home, after the war, that will renew your joy in your home, and enhance its value.

How can this be accomplished? The five steps outlined here have already been successfully followed. They are adaptable to any new home now being planned. The extra care taken *now*, in planning, will pay dividends in years to come.

First, have your new home's wiring layout made to meet the standards of minimum adequacy, including circuits and outlets for all the electrical services you have always wanted in your home.

Next, have your electrical contractor or builder go over the plan, eliminating outlets as necessary to bring the wiring plan within limitations of the Defense Housing Critical list. In so doing, be sure to eliminate *first* those outlets which can be most easily added.

Have the builder or wiring specialist detail the arrangement of circuits for remaining outlets to use the minimum amount of cable. This has the double advantage of conserving copper and minimizing voltage drop within the house. "Voltage Drop" between meter and outlet, is often the cause of inefficient appliance operation. It reduces your home's "EEQ".

Next, be sure that all outlets eliminated on your plan are identified with the symbol "FO" for "Future Outlet." Also, be sure each outlet from which cable will later be extended, is designated on the plan as "SO" for "Supply Outlet."

During construction, see that the electrical contractor drills all necessary holes in sills, plates and subflooring, for the cable that will supply "Future Outlets." Also, have the necessary holes to reach the basement drilled at each "Supply Outlet" location. By suspending fishing string in these holes, later cable-pulling will be made easier.

YOUR HOME DESERVES

THIS MODERN CONVENIENCE AND PROTECTION

SQUARE D MULTI-BREAKER

and you can have it because Uncle Sam has put it on the Defense Housing Critical List *

The Square D Multi-breaker eliminates fuses completely—and at negligible cost.

When a short circuit or overload occurs, the Multi-breaker cuts off the circuit automatically. A simple movement of the shock-proof circuit breaker lever restores the current after the cause of the overload has been removed. No lost time. Nothing to replace.

Cost for the average home is about $11.00—little if any more than the ordinary switch and fuse equipment it replaces. And your first cost is your last. Ask your electrical contractor for details.

***WPB, HOUSING PRIORITIES BRANCH, EFFECTIVE FEBRUARY 24, 1942**

MAIL COUPON FOR MULTI-BREAKER SPECIFICATIONS FOR **Victory Home**

SQUARE D COMPANY, 6060 Rivard St., Detroit, Mich.
Please send me illustrated specification sheet showing ideal Multi-breaker installation for the Victory Home.

NAME.....

ADDRESS.....

CITY..... STATE.....

SQUARE D COMPANY • DETROIT

Fireplaces

THE brightness, warmth, and comfort of a fireplace are so well-known to all of us, that a recounting of these pleasant qualities seems superfluous. We all are aware of the genuine enjoyment with which we enter a room where a fire is burning in an open fireplace. Somehow, the cares that beset us seem dimmer, and life seems better.

Modern mantels retain all of the charm of the old ones, with the added advantages of new equipment. A metal fireplace unit now available circulates the warm air from the burning fire throughout the room. What a contrast to the system of roasting in front of the fire, only to freeze in another part of the room. And the wasted heat, which once went up the chimney, is put to valuable use in providing warmth.

The fireplace has served mankind steadily and faithfully for many centuries, to warm him, solace him, and provide the flame which cooked his food. Now that it is no longer absolutely necessary for heating and cooking, it serves as a graceful, friendly addition to any room. And its presence always suggests hospitality.

A fireplace, you will find, helps to solve many an entertainment problem. Toasting marshmallows or popping corn are delightful pastimes for your guests and your children's guests. A card table set up in front of a brightly burning fire provides a truly festive setting for a Sunday night supper.

In the summer, your fireplace can also be a source of pleasure. A large bowl of green leaves or flowering shrubs on the hearth produces a cool effect, and brings a welcome touch of the out-of-doors into your home.

Six Points of Construction

But a fireplace, to give true satisfaction, must be something more than a decorative and social feature of a room. Six vital points will provide for a fireplace which burns at all times without smoking. *First,* proportions: the width should, of course, be sized to the room, a matter for you and your architect or builder to decide. Once width is determined, height can be chosen. The height of the opening should be about three-fourths of the width. *Second,* depth: the distance from back to front, at the hearth, is variable. Usually, it is not less than 18 inches nor more than 26 inches, but variations are permissible. If you want an especially deep fireplace, or a shallow one, set the damper enough above the top of the fireplace to give a moderate slope to the back. As long as the pitch or slope at the back is correct, you can alter the regular dimensions. If, however, your fireplace is less than 18 inches deep, it is too shallow; if more than 22 inches, it is too deep unless it is wider than 48 inches. *Third,* throat damper: this should be installed in the neck of the fireplace. It may be opened or closed to retain heat in the house. It should be of cast iron, with a bottom opening of not less than 9 inches depth. It should be simple to operate, and should last as long as the fireplace. *Fourth,* smoke chamber: shaped like a funnel, this device carries the smoke through proper channels. *Fifth,* windshelf: for the elimination of drafts down the chimney. *Sixth,* flue: a small flue cannot take smoke off rapidly enough, so be sure your flue is at least one-twelfth the size of your fireplace opening.

Choice of Designs

Once the functional aspects of your fireplace are established, you have a wide variety of designs from which to make your selection. Your fireplace is the focal, or centering point for the room which it graces, so you want a decorative style which combines with the type of your home and its furnishings. A consultation with your architect or builder, augmented by a reliable catalog, will help you in choosing.

KNOW FIREPLACE FACTS

HOW to design, specify, build for fullest fireplace satisfaction, securing maximum heat with freedom from smoke nuisance. . . . The Donley Book of Successful Fireplaces (ninth edition) brings you more than 200 photos, designs, sketches, illustrating fireplaces and features of construction. . . . Learn how the Donley Heatsaver Unit provides a complete heating system for your low cost home . . . how an Outdoor Fireplace, large or small, adds delight to outdoor premises. . . . This book deals fully with theory and practice of fireplace success—how to equip, operate and repair. . . . Interesting outline of fireplace history. This book has guided many hundred thousand home owners over a period of a quarter century. . . . It is issued by the Donley Brothers Co., makers of a great variety of home conveniences and building specialties. Cut out, fill and mail coupon today with indicated price and receive this 64 page book by return mail.

THE DONLEY BROTHERS CO.
13954 Miles Ave., Cleveland, O.
Enclosed find 25 cents (35 cents in Canada) for which mail me a copy of The Donley Book of Successful Fireplaces, 9th edition.
Name .....
Street and No. .....
City and state .....

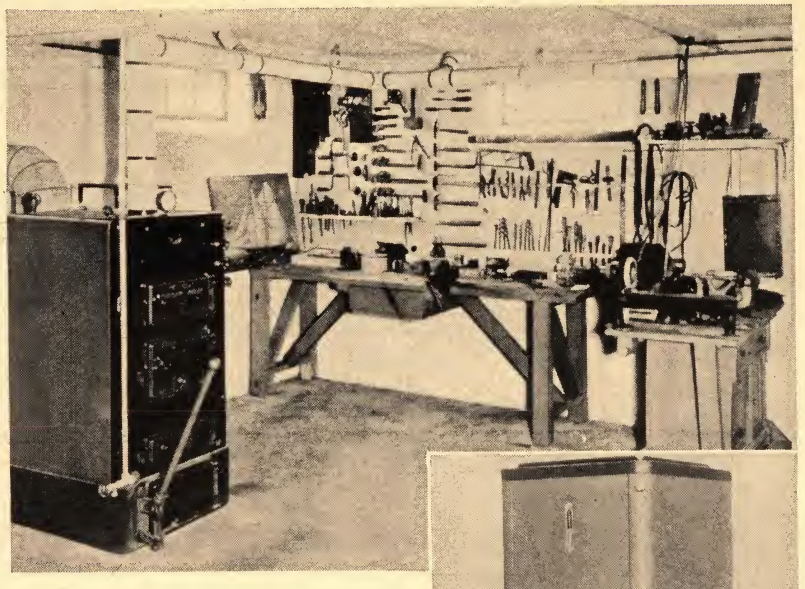
EQUIPMENT

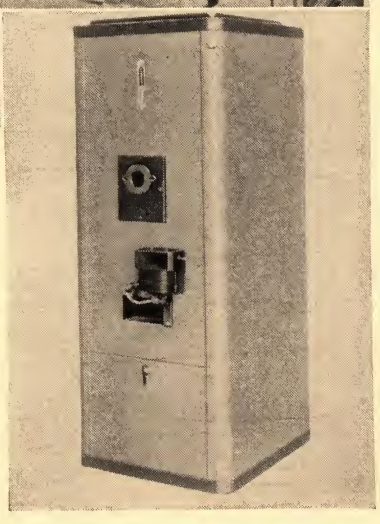
Before purchasing any equipment for your home, you should know the facts herein presented about the different types of heating, kitchen and bathroom equipment. Remember—plan for the future as well as for today.

Heating . . . AIR CONDITIONING . . . HOT WATER

SELECTION of your heating plant is one of the most important decisions you will make in planning your new home. No one item in the house is more vital to the health and comfort of your family. The purchase of a heating system should not be considered entirely as an expense, but as an investment as well.

Many questions will come up regarding the merits of the different systems and the types of fuel. We will try to give you an understanding of these and the advantages of each in this article.





A HOBBY ROOM in the basement is a great joy. The present furnace is the small efficient hand-fired coal boiler which can be changed to automatic heat by the use of a stoker and automatic controls. At the right is illustrated forced warm air type of heating unit for either gas or oil.

Add Central Heating Later

There is no way of completely equipping a house without the use of some metal—and metal is now required for war production. We must all cooperate with the government in its metal conservation program.

Many heating manufacturers have turned their entire production facilities over to the manufacture of war materials. The limited number who remain in the field are doing their full share to cooperate in the war effort by cutting down on the use of vital materials. They are substituting materials wherever possible with two views in mind: (1) using the best substitutes available so as not to reduce heating efficiency, and (2) using economical substitutes to keep down prices. A large number of improvements have resulted from this use of new basic materials.

Mr. and Mrs. Consumer will have fewer models to select from. However, the models eliminated almost all fall in the category of "special" units designed for unusual and limited purposes. For the average consumer the choice that presents itself today will appear to be almost as wide and varied as ever. Thus, when one manufacturer eliminated over 75% of his furnace, water heater and space heater models, the selection of models remaining prove to be such as to satisfy every normal need. Nevertheless that manufacturer was able to practice real conservation.

Mr. and Mrs. Consumer can cooperate too. A sensible procedure is to build the house now, using as little metal as possible. Then, later on, when circumstances permit, add the equipment which is needed for convenience and comfort. The important thing is to plan the house heating toward this end so as to avoid structural changes later.

What to Do?

What about the heating plant for the low-cost home? Is it possible to build the house now, heating it temporarily with a stove, fireplace, or other space heating equipment—and later, installing central heating, either hot water, steam or warm air? Yes, it is possible.

The cost of adding the central heating plant later can be kept at a minimum if the house is planned and constructed with a future improvement in mind.

The trend toward compactness in heating plants is definite. Pipe sizes for hot water heating and duct dimensions for warm air are smaller. With forced circulation large and heavy pipes and ducts are not necessary. Metal is conserved.

In the case of a two-story house with pipes or duct work running between walls, it would be desirable to install these pipes or ductwork while the house is under construction. Black iron pipe is not on the critical list and is available for heating plants. As for the duct work, while galvanized sheets are on the critical list, there are acceptable substitutes. Ducts made from composition fireproof materials are available, although they should not be installed close to the furnace.

Both for heating economy later and for comfort while temporary heating equipment is being used, the house should be well-insulated. Good insulation always pays.

Modern forced circulation hot water and warm air heating plants operate equally well from a utility room as from a basement. Furthermore, both hot water and warm air heating plants are so compact today that it is entirely practical to place the heating unit in the kitchen, if it is so desired. The boiler takes the place of a radiator. The volume of steam given off by the boiler can be increased or decreased by vary-

VICTORY SUGGESTION

Build now and, if you have to, add your central heating later. This can be designed into your home so that the pipe or ductwork required later for the central heating system can be added without structural changes.

Obviously a central heating plant requires a considerable quantity of critical materials whether it be the pipe required for steam or hot water, or the ductwork for warm air heating. The present Defense Housing Critical List does not permit the use of steam or hot water but does allow for a central warm air heating plant provided the heat loss is held down to a minimum through proper insulation, thereby reducing the size of the plant required.

Gas and oil have been banned for new equipment installations in certain states. You may have to use a hand-fired coal furnace now, but you should arrange so that this may be readily converted to oil or gas, or for the addition of a stoker to provide automatic coal heat.

ing the amount of insulation on the unit.

All boilers, whether fired with coal, oil, or gas, can be obtained with a unit for the heating of domestic hot water, built into the boiler. This eliminates a separate water heater, a saving in space and a saving in equipment. However, conclusive evidence of tests prove that water heating costs are considerably greater to the consumer.

In selecting radiators for a hot water or steam heating plant, the owner will have a choice between small free-standing radiators and convectors with some units combining the characteristics of both radiators and convectors. Convectors may be entirely concealed in the wall or recessed.

The typical low-cost house will probably have one of the various styles of small, free-standing radiators placed under windows. Here again the home-owner will have the option of having the radiator set in a recess under the window or having the unit placed snugly up against the wall or slightly away from the wall.

In either event, it is interesting to know that radiators can be obtained only a little over three inches wide. In order to cooperate with the government, manufacturers of radiators recently simplified their lines. However, there is a satisfactory choice for builders.

Types of Heating Plants

The furnace-type space heater known as the "Victory" heater is ideal for the typical low-cost home. By fan-forcing air out at floor level, it provides all-over circulation of heat, eliminates cold floors and hot ceiling. It combines the best features of the space heater and the furnace. "The "Victory" heater saves on metal and fuel yet will efficiently heat the average defense home. This is a most efficient and economical heating substitute to a central heating plant.

There are three main types of heating systems: *steam, hot water,* and *hot air.* Let's look in the points of each and see if we can't help you make the selection best adapted to your particular needs, pocketbook, and locality. *Steam:* This type of system has four variations, commonly known as one-pipe, one-pipe vacuum, two-pipe steam,

IT'S THE **CONTROLS** THAT MAKE AUTOMATIC HEATING AUTOMATIC

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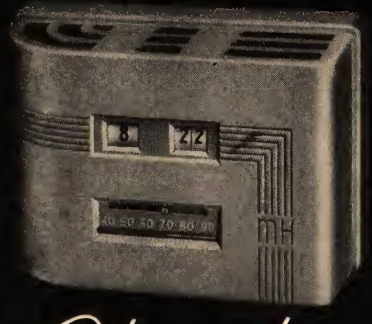
your Automatic Heating plant gets every chance to operate at its best. Insist upon complete Minneapolis-Honeywell Controls. If you live in a defense area, Automatic Heating and Automatic Controls, because they provide health protection and low fuel cost, will be considered for priority rating. Automatic Heating will add greatly to the resale or rental value of your home. Play safe—insist upon M-H Controls. They cost little, if any, more. Minneapolis-Honeywell Regulator Company, 2730 Fourth Avenue So., Minneapolis, Minnesota.



THE *Chronotherm*

This new M-H Clock Thermostat automatically lowers temperature at night and restores it in the morning. Saves 10% to 30% fuel, yet costs only $18.00 more than a manual thermostat.

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Our Government says: **CONSERVE FUEL!**

Our Government asks everyone to save fuel and fuel conservation starts with modernization. An effective heating system will burn less fuel and give better results with lower maintenance. The small difference in price between a good and poor heating plant is quickly saved through lower fuel bills. It pays to have a good heating system.

Repair for Defense

If you are able to repair your heating system to put it in good working order, the Government urges you to do so. If not, however, now is the time to install a good heating system to assure yourself of heating comfort for years to come.

Consult Your Local Dealer

Your local dealer, who is our representative, is best able to serve you and he will be glad to inspect your heating plant and give you a free estimate of the cost of repairs or replacement. A generous time-payment plan is still available with a moderate down payment, eighteen months to pay and small monthly payments.

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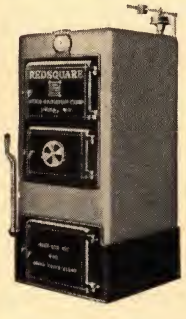
Send for an attractive Defense Savings Stamp booklet which illustrates and describes the important men and events in our nation's history up to the present war with nations opposed to all we hold sacred. Send for this book and become a Minute Man in your country's defense.



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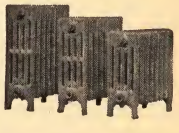

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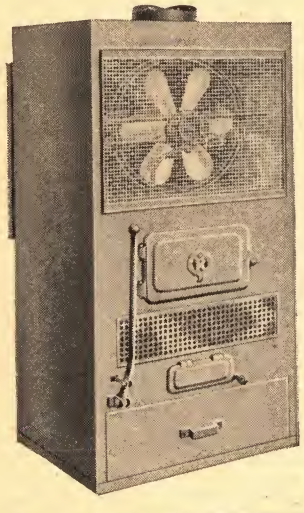
Kehm FREE-AIRE is the *only* heating system designed and guaranteed to give perfect comfort heating without the use of duct work. Satisfy both yourself on comfort and your government on critical metals by specifying Kehm FREE-AIRE.

Compact, self-contained central heating unit occupies little floor space. Flow of warm air, set up by a blower fan, is balanced between two zones—(A) central hallway, and (B) living quarters.

Attractive new design in fan operated heater quickly and constantly delivers heat *at the floor.* Ideal for packaged fuel. Simple ash disposal. Minimum price — Maximum comfort. Coal or Gas.



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HEATING . . .

two-pipe vapor. One-pipe steam is the lowest costing installation. It is quick to respond and because of operating at a high temperature (212°), the radiators can be smaller than with the hot water system. Each radiator is equipped with a venting valve which lets the air out but shuts off when the steam reaches it. When the steam goes down, the venting valve lets the air back into the radiator. After a bit the radiator cools off. In this system the steam flows from the boiler to the radiator. The condensation from the radiator goes back to the boiler in the one pipe. Therefore, the control valve to the radiator must at all times be either wide open or fully closed. If it is shut down only half, the opening in the valve will not be big enough to permit the flow of steam to the radiator and the flow of condensation back to the boiler, resulting in a hammering noise.

The one-pipe vacuum system is the same as the regular one-pipe system except a special vacuum venting valve is put on each radiator. This vacuum venting valve creates a partial vacuum in the system. Since water boils at a lower temperature in a vacuum, steam reaches the radiators faster. This valve also prevents the air from getting back into the radiator for a long period. The radiator, therefore stays hot longer.

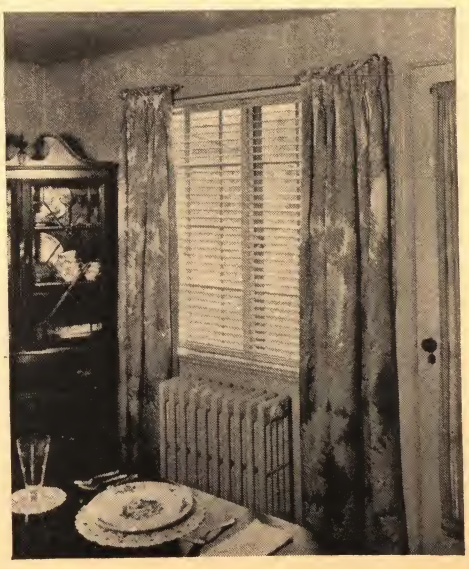
In the two-pipe steam system the steam flows from the boiler to the radiators in one pipe and the condensation from the radiators flows back to the boiler through a separate pipe. This system is, of course, somewhat more costly than the one-pipe but it is more flexible due to the fact that the amount of steam flowing to each radiator can be controlled, since there is no interference with the condensation which flows back through a separate pipe.

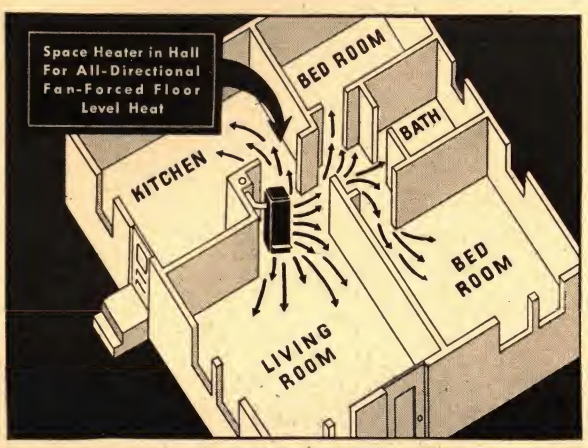
The two-pipe vapor system is similar to the two-pipe steam system except that a special control valve and a special steam trap is connected to each radiator. A partial vacuum is also created and maintained in this system. As a result, the radiators will become hot faster and will retain the heat longer. This system is the most costly of steam types, but the convenience of control and the comfort assured, not to mention the fuel saved, often warrant it.

Hot water: Water starts circulating the minute there is any heat in it, and you get heat from your radiators. It is a delightful low temperature heat.

A PARTITION of knotty pine separates the game room from the furnace room. This makes an extra room for the children to entertain their friends or play on rainy days.

THIS RADIATOR fits snugly up against the wall. Radiant heat from the front and sides warms everything in its path and meets the cold air that enters at the window.





A VICTORY type space heater of furniture design, suitable for use in living room, blows heat out at floor level.

This type of heat can be provided from either a one-pipe or two-pipe system.

Hot air: This type of system is designed in two forms—one known as gravity hot air and the other as forced air circulation.

With a gravity type system, the furnace is usually in the middle of the basement, with one large register in the floor directly above, or individual air ducts from the furnace to each room. As the cool air from the rooms comes back to the furnace through what is called a return duct, it is heated at the furnace to a high temperature and flows by gravity to the same rooms.

The furnace in the forced circulation system is similarly installed but the ducts are somewhat smaller and an electrically driven fan pulls the air back to the furnace from the rooms. After it is heated, at the furnace, the fan blows the air at high velocity back to the rooms.

Smaller, more compact, yet completely automatic oil- and gas-fired units are available for installation in recreation room, utility room, heat closet or kitchen. And for defense homes without basements, oil-fired floor furnaces can take over the heating job efficiently with a great saving in floor space. This type of unit provides the simplest type of furnace installation. There's no ductwork to install, and the unit comes completely assembled.

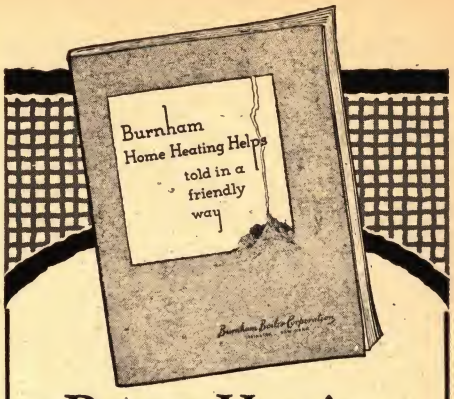
There are already a large number of installations of the so-called free air system of warm air heating which provides that the heating unit is located so as to make the central hall a plenum to supply all of the connecting rooms. The doorways, making use of louvered doors, act in the place of grille openings, allowing greatly increased areas for the free circulation of heated air.

The typical floor plan on page 64 illustrates how the heater of this system is located so as to provide proper circulation to each room. The system is readily adaptable to a wide variety of room arrangements as it was found that the pattern necessary for this system is generally repeated with minor variations as to relative size, position and other details.

Types of Fuel

There are three principal types of fuel: coal, oil and gas. All three can be used in automatic heating systems "piped"—gas, from an outside main; oil, from a tank; coal, from an enclosed bin to the stoker.

Take these factors into consideration



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Three ways to heat DEFENSE housing *with* FITZGIBBONS

UNITS – *designed and specifically adapted to meet all conditions*

Priced to fit the market—Easily and quickly installed—Exceptionally low in fuel consumption. *Mail the coupon for full details.*

WARM AIR FURNACE 80 FWA

For coal hand firing. Automatically controlled blower circulates warmed air. Meets all specifications of the Procurement Division of the U. S. Treasury Department, and the requirements of FWA, USHA, PBA and FSA for Defense Housing. Fitzgibbons "Weldseal" construction positively insures against leakage of flue gases.

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A distinctly *small home* warm air furnace conditioner, of welded steel construction. Warms, humidifies, filters and circulates the air. Quiet in operation, beautiful in appearance. Extremely low in fuel consumption.

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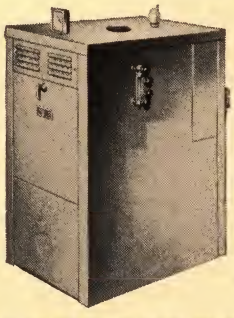
400 SERIES STEEL BOILERS

The choice of architects and builders for low cost heating of small homes, including defense housing using radiator heat with oil, gas or stoker firing, or coal hand firing. Built-in copper coil gives domestic hot water. All the advantages of steel boiler construction. Attractively jacketed, priced for the field it serves.



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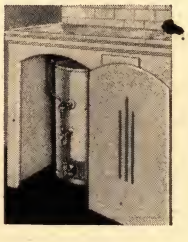
● Healthy workers at home must have healthy surroundings. They must support the war effort with alertness, skill, endurance. Hot water at all times is a vital part of their daily lives. Hotstream is cooperating to supply hot water in Victory Homes with modern, adaptable heaters . . . designed for this job . . . made to keep the home front strong and vital.

HOTSTREAM "V" *Line*

GUARANTEED 20 YEARS

Completely automatic Storage Water Heater. Vitreous enameled (glass lined) Tank inside and out. Fiberglas insulated. The best that can be had for Victory Homes. 15 to 60 Gallon capacity.



HOTSTREAM Kitchen Cabinet

Here is a hot water heater that will do a big job—an efficient job—in a small space. Completely automatic. Fits in a small space or compartment under sink. "Victory" homes will like it. 20 Gallons.

VICTORY Side Arm Heater

A low cost unit with "Fin-Type" cast iron heating element, pressed steel jacket, heavily insulated with Fiberglas. Modern design combined with high efficiency makes this an outstanding water heater for the Victory Home.

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A low-cost, quick recovery, automatic water heater. Modern, striking appearance, highly efficient. Ideally suited to the needs for economy and unfailing service in "Victory" homes. 15 to 30 Gallon capacity.

All HOTSTREAM "Victory" Water Heaters are approved by A. G. A., Accepted by F. H. A., U. S. H. A., War Dept. and other Governmental Agencies.

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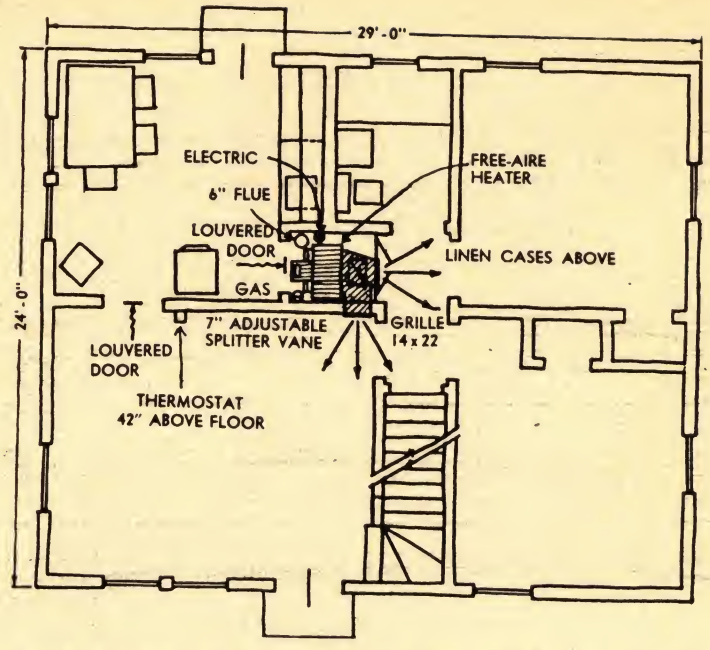


WPB RULING has emphasized the importance of conserving critical materials. The above is one of a number of house plans which have been approved using the free air system.

in making your selection: (1) fuel storage because oil takes a tank and coal a bin but the storage problem is less for oil than for coal; (2) cost because prices and rates vary in different sections of the country, with even rural and urban costs often differing; and (3) availability. This latter consideration is particularly important today. There are shortages in all three types of fuel, depending on the section of the country you live in. Oil is still best available in the mid-continent (Middle west) area and in the Southwest; gas in New England and West of the Mississippi; coal in the East and Southeast.

Basic Controls

The basic controls are also three: temperature, humidity, and flow distribution.

The thermostat is the brains of automatic heating. It detects the need of heat and relays the message to the boiler. The part that the thermostat plays at night is very important. Clock thermostats reduce the night temperature and start it up again in the morning.

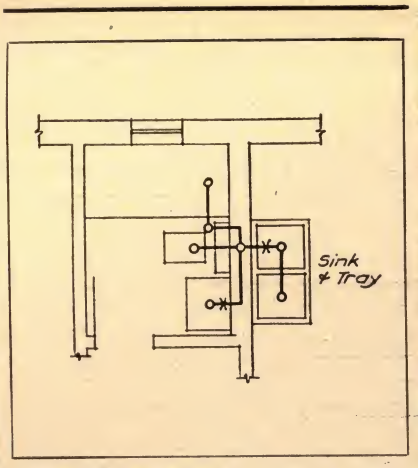
Humidity controls detect the need of moisture in the air, and relay the message to the air-conditioning apparatus.

Hot Water

For the summer, the hot water supply is controlled by an aquastat. You set it at 180°. Whenever enough water is drawn from your hot water supply to lower the temperature, the aquastat turns on the fire. No needless fuel is burned, and you have hot water all year round.

Both automatic and hand-fired hot water storage tanks can be had in a variety of sizes. One of the most popular types for small homes is a table top hot water heater that is placed in the kitchen. Another type is the unit that can be placed underneath the kitchen sink which has a 20-30 gallon capacity. Still another type is shown in the illustration below.

THIS COMPACT gas fired forced warm air heating unit is typical of the latest developments in efficient small home furnaces suitable for installation in a utility closet on the main floor of basementless houses. Also shown in this closet is a modern automatic gas-fired water heater and storage tank. Both units have the American Gas Association emblem of fire-safe approval.



MINIMUM PIPING is required when bathroom fixtures and the kitchen sink back up to the same wall. This diagram for a one-story, one-family house, was made for the Emergency Defense Housing Plumbing Codes.

Planning YOUR PLUMBING FOR BATH . . . KITCHEN

THE demands of national defense for the conservation of strategic metals make it imperative that the use of these metals for other than strictly military purposes be limited in every possible way. Through simplification, substitution, and streamlining of design, the plumbing industry is cooperating with the Federal government in finding new ways to save critical metals and yet retain the fundamentals of good sanitation.

While manufacturers have simplified their lines by eliminating certain fixtures and re-designing others to save metals, plumbing contractors made a notable contribution to conservation by developing in the "Emergency Plumbing Standards for Defense Housing" an installation technique that saves labor as well as metals.

The Emergency Standards

The Emergency Standards are, in reality, a temporary plumbing code without legal subtleties, and streamlined as far as possible. The standards are temporary and will be effective only during the war. The Emergency Standards are higher than the provisions of many codes now in effect.

The committee which drew up the standards had only two objects in mind: to conserve critical war metals and to protect health.

The new standards fully cover the basic requirements of good practical house plumbing, namely: drainage pipe area so that waste matter has an unimpeded discharge to the sewer, and vent pipe area to prevent siphonage of fixture traps, providing normal conditions prevail in the system.

Inter-connections, cross-connections, and back-flow possibilities are barred. Pressure relief valves are required on hot water tanks. Quality workmanship, rigid inspection and tests are required. Re-inspection is authorized on suspicion of a defective system.

These are some of the provisions to protect health and property: In respect to health protection the Emergency Standards are said by the plumbing industry to be superior to "BMS-66," a plumbing code drawn up about a year ago by the National Bureau of Standards in cooperation with other Federal agencies. Plumbers opposed the code and it never was put into effect. For instance, under the Emergency Standards the soil pipe stack must be 3 inches through the roof, whereas BMS-66 permitted a reduction to 1½ inches.

Also Emergency Standards provide for clean-outs, not required by BMS-66, the distance the fixtures may be away from the stack without individual venting has been reduced from as much as 8 feet to 5 feet. The size of the wet vent, where used, is increased to 2 inches whereas 1½ inches was permitted.

The Standards provide for a 3-inch house drain. Three-inch house drains have been the accepted standard in many localities for a number of years.

The government anticipates a saving of at least a hundred pounds of metal for each single-family house unit.

Because copper and brass are high on the list of critical war metals, the Emergency Standards prohibit their use for some purposes where other materials are adequate substitutes.

Standardization and Simplification

Equally significant with respect to the conservation of raw materials is the progress in standardization and simplification made by the plumbing and heating industries in recent months.

The fitting industry is an outstanding example of what is being done. Effective with the beginning of this year, the number of kinds, sizes, and types of pipe fittings to be manufactured for stock is reduced by more than one-half, thus effecting a substantial conservation in cast iron, malleable iron, bronze, and brass.

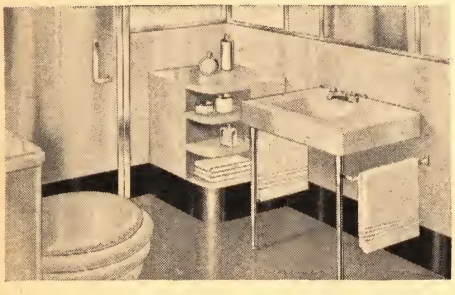
Instead of making 8,566 different kinds and sizes of elbows, tees, unions, branches, crosses, and other pipe fittings, the industry hereafter will concentrate its manufacturing efforts on the production of about 3,000 items.

Less extensive but equally important

PLANNING YOUR PLUMBING FOR BATH . . .

THESE TWO BATHROOMS give attractive proof of practical low-cost plumbing. To the left, note the adequate tub and lavatory ledges, and elimination of legs on the lavatory. The color scheme is red, white and blue. The fixtures on the right include a convenient built-in shelf for linens and tall bottles. The colors, rose and blue, are interestingly combined.

Your BATH should have Distinctive Douglas FIXTURES



Today's bathrooms demand Beauty, Utility, and Convenience. DOUGLAS fixtures combine these essential requirements with true economy. They are available in many designs, sizes and colors. DOUGLAS fixtures combine quality of material, quality of finish, and quality of appearance—**built to last a lifetime.** Your DOUGLAS dealer will be pleased to show you the DOUGLAS line and give you all estimates.

THE JOHN DOUGLAS COMPANY
CINCINNATI **OHIO**

to operative builders and contractors is the simplification in the number of plumbing fixtures and the re-designing of some fixtures to save metal.

Not only have manufacturers reduced the number of lavatories, baths and closets offered to the trade but they have also eliminated some of the slow-moving fittings.

A new single-shell 5-foot recess wing bath for building-in requires 26 per cent less iron than a similar size double shell bath. Lavatories also have been re-designed to conserve iron and steel.

Meeting the Call for Quality

Meeting the call for high quality at low cost, the plumbing industry has designed new durable fixtures for large homes being converted into multi-family dwellings, for new homes and for military and naval housing.

Even the minimum budget bathroom fixtures are very attractive. The tub is made of enameled cast iron recessed, single-shell and is enameled inside only. The front apron has been left off to conserve materials, but the tub has a wide 3½-inch rim which forms a convenient seat. A flat bottom on this new tub provides extra safety for the bather when standing. Another safety feature is the built-in mixer fitting with spout outlet to permit tempered hot and cold water to flow into the tub. This spout is 1½ inches above the highest point of the rim to prevent back-siphonage. The tub has two integral soap dishes, which makes a wall soap dish unnecessary.

A small shelf-back lavatory of enameled cast iron gracefully comprises the second of these new bathroom fixtures.

BOARDTILE WAINSCOTING provides wall interest in this bathroom. The towel rack at the side of the lavatory saves groping. The flooring is boardtile, also, and easy to keep spotless.

GLASS BLOCK furnishes extra light in the first bathroom shown above. Tiled walls and a generously-ledged tub are worthy of mention. The ivy-patterned wall paper and Venetian blinds increase the appearance of the second room. The use of wood as a decorative medium in a bathroom is effectively shown in the photograph at right.

LEMON YELLOW AND BLACK are used above to decorate a thoroughly modern bathroom. The lights flanking the wall cabinet are ideal for make-up or shaving.

THIS POWDER ROOM is small, but the plain walls and adequate light make it seem a larger place. You might try a cool gray-green on walls, and a maroon floor.

The lavatory is small in size for economy of space, but has a large water area—a capacity of 1½ gallons. The roomy shelf makes a convenient space for toilet articles. The lavatory, like the tub, has a single spout which provides tempered water.

The water closet that completes this ensemble is close-coupled to hide the connecting pipe from tank to bowl. It is an efficient, wash-down type of closet.

Bathroom Planning

There are a number of different arrangements of the fixtures for a small bathroom. The practice of placing the tub under the window in a long narrow room, disposes of the largest of the fixtures but this has often been unsatisfactory because of the difficulty of getting at the window to wash it or to operate it. If the floor plan permits, avoid this setting.

The position of the closet bowl is probably the most important of all, and the niceties of present-day living make a point of having it as inconspicuous as possible. It might be possible to place this fixture behind the door or to build a small partition to conceal it. The bowl should be located so as to connect into the stack or large vertical drain without having to cross the floor of the room. Your plumber can tell you if your plan is a workable one.

The lavatory is the most used and attractive of all the fixtures. Place this so it can be seen on opening the door, if possible.

The waste connections from the tub and lavatory are small in comparison to the closet. They can be run under the floor without much danger of weakening the structure.

Color can be introduced in the fixtures, on the floor and walls and in the accessories.

The walls and floor should be waterproof, easy to clean, and unaffected by household acids. A wonderful assortment of tile, linoleums, boardtiles, and wallpaper are available. Colorful

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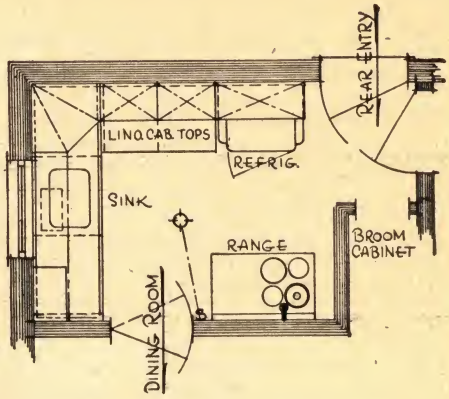
PLANNING YOUR PLUMBING FOR KITCHEN . . .



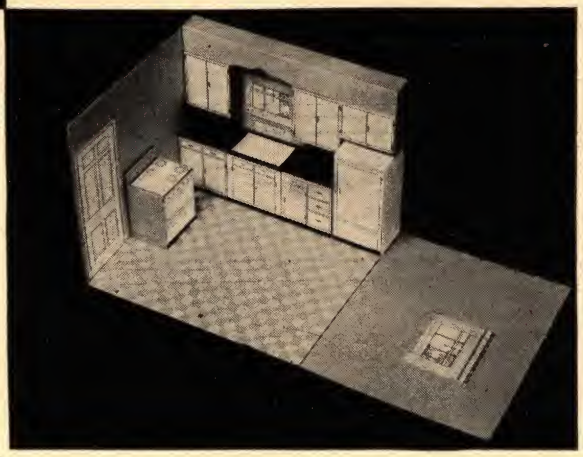
THE FLOOR PLAN for the compact kitchen to the left is shown on page 13. The floor plan to the right demonstrates a good way in which to place the three working centers explained in this article.

towels and rugs to match or harmonize can make your bathrooms bright and pleasant.

Kitchen Planning

Work in any kitchen boils down to just three major tasks: (1) Storing and preparing food; (2) Cooking and serving it; (3) Cleaning up. Therefore, a kitchen organized into these three work centers will save hours of work and miles of walking.

These three work centers are built around the refrigerator, stove and sink respectively. Generally speaking the refrigerator—*the storing and preparation center*—should be placed near the outside door and the stove—*the cooking and serving center*—near the dining room door and the sink—*the cleaning up center*—somewhere between both these other centers. If you provide for the three work centers specified in this article, we feel sure that your kitchen work will not seem as burdensome or tiring to you.



THE PLAN for this Victory Home Kitchen appears on page 17. The units are concentrated to provide the greatest efficiency and step-saving for the housewife. See how the ice-box is placed in the sink and cabinet space.

The Storage and Preparation Center

Here should be grouped perishable and non-perishable foods, all sorts of baking dishes, salad molds, cake tins, mixers, et cetera, because they are first brought into action in this *center*.

There should be a generous work surface next to the refrigerator for the actual preparation of food. The most ideal arrangement is a continuous work surface, from the refrigerator to sink, as much of the preparation requires the use of the sink and adjacent working surfaces.

A FOLDING TABLE and built-in cabinets contribute much to this attractive kitchen.

The Cooking and Serving Center

This *center* should be located near the dining room or dining alcove so that food will reach the table piping hot. Following the principle of storing equipment at the point of first use, frying pans, griddles, pots, cooking cutlery, et cetera, should be kept here. Since most serving dishes are first used at the range, they also should be kept in this center.

The Cleaning Center

Water is used in both the preparation of food and for cooking. Therefore this *center* should be stationed between the refrigerator and the stove.

A BUILT-IN SEAT is the special feature of the above kitchen. An attractive dining area is achieved by the seat and window placing, which separates it from the working centers. The wall cabinet is unusual, with its wooden frame and braces to hold dishes.

A generous work surface should flank both sides of the sink.

According to the established principle of storage, this *center* houses the silver, paring knives, sauce-pans used for cooking with water, cleaning materials—and provides a ventilated compartment big enough for a week's supply of potatoes. Wall cabinets above the sink can hold glassware and china.

In addition to the sink this *center* when completed should have a garbage disposal and a dishwasher. Due to war conditions these units will have to be added later but plan for them now.

Also the hot water heater can be placed in this *center*. A good type to use is the table top model which provides additional working surface.

Cabinets

Kitchen cabinets are made of wood or steel. It isn't necessary to buy them all at once but you can add to the ones you decide you need most later.

Six square footage of upper cabinet must be allowed for each adult. But the best guide for you is to have as many cabinets as the kitchen allows.

Wall Surfaces and Floor Coverings

The walls and floor of the kitchen must be easy to keep clean. Linoleum or rubber give excellent service and

RANGE, sink, laundry tub, storage cabinets, are all included in the unit illustrated at right. Its neat appearance is a distinction in any sized kitchen.

ICE BOX (left), stove, storage space in one! A real time-saver and a real convenience, you will agree.

A COMPACT STOVE, built into a stand, is a useful addition to the small kitchen. The door below the oven opens to reveal a commodious cabinet.

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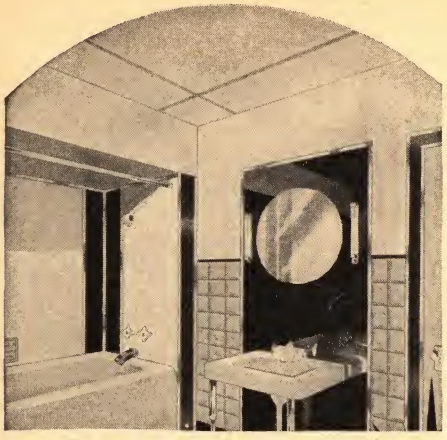

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No Unsightly Garbage Cans

Food waste disposed of while fresh. All you do is place the contents into the sink drain opening, turn on the cold water, then the switch and the IN-SINK-ERATOR does the rest. Reversing feature of rotor shredder each time the unit is turned on assures long life and trouble-free operation.

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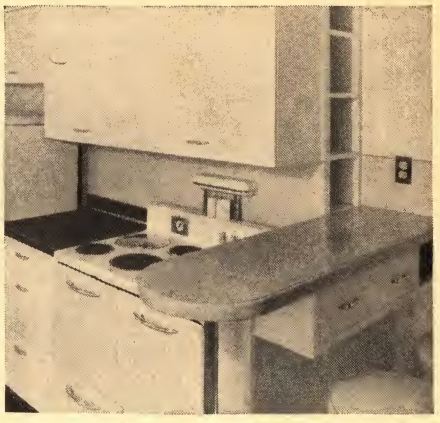
Specializing exclusively in the manufacture of electrically operated "Kitchen Food Waste Disposal Units."

can be had in a variety of attractive patterns and colors. If you decide to use rubber, it will have to be installed after the war.

Wall surfaces may be of ceramic tile, boardtile, linoleum, or plaster painted, or papered with a washable wallpaper. Tile, boardtile or linoleum are a little more expensive to install but have the advantage of doing away with periodic renovating expense. Paint or wallpaper can be changed to give an entirely new color scheme to the kitchen.



A BREAKFAST BAR, with a polished wooden top, and accompanying stools, is not only unusual, but a genuine kitchen aid.

HINTS ON PLUMBING CARE

"I will take care of what I've got." That's part of the Consumer's Pledge to the government—an important promise that the American home will do its part to help win the war.

How can this be done? Begin by casting a critical eye on all home equipment, particularly your plumbing equipment. It must last, and for a long time, because the copper, brass, zinc, chromium, iron, steel and lead used in the manufacture of plumbing fixtures are vital to national defense—to national victory.

Here's what to look for: First, all leaks. A leaking faucet may cause permanent damage to the seat of the faucet so that replacement of the entire faucet will be necessary, unless the seat is of the removable type. Furthermore, rust stains from a slow drip may penetrate so deeply into the lavatory, tub or sink that they cannot be removed without damage to the glaze. For the same reason closet tank leaks should be repaired promptly.

The leaking faucet wastes water, and if the water is hot, it wastes the fuel required to heat it.

Next, watch your drains. Sink drains should be kept clean by pouring scalding water down the drain once a day. Greasy water should never be poured down the kitchen drain unless there is a grease interceptor. Ravelled or frayed dish or washcloths should not be used because lint tends to clog the drains.

Don't pour your coffee grounds down your drain. The combination of coffee grounds and grease forms a hard substance that stops the drain. Train yourself and your family to get over the habit of washing hairs down the drain. Beauty parlors have hair traps that keep their plumbing pipes clean, a little care on your part will protect yours.

Don't pour lye down your drains. Lye may take the finish off the fixture and clog the trap. When lye comes in contact with grease it forms a hard soap which will clog a pipe.

And now, stains. Avoid spilling cosmetics or medicines on the bathroom lavatory. Wash them off promptly before acids have a chance to eat into the fixture. Lemon, tea leaves, juices from fruits and vegetables, all leave stains that are difficult to remove. Photographic fluids used in developing pictures, hot pans, jabs from ice picks in breaking up ice, are all enemies of the surface of the sink.

It's easy to keep your fixtures lustrous and shining. If they are vitreous china, simply wipe them off with a damp cloth, as you would your best plates. Enameled cast iron needs only soapy water. A brush and soap and water will do most of the cleaning jobs. Don't use gritty abrasives or strong cleaning solutions.

Pipe. A burst pipe means a major replacement involving critical materials. Insulate all pipes in exposed positions to prevent them from freezing. Shut off your water and drain all your fixtures if you plan on leaving your home during the winter months. It's the water in the pipes that freezes and causes the pipe to burst. Take the necessary precautions to prevent this.

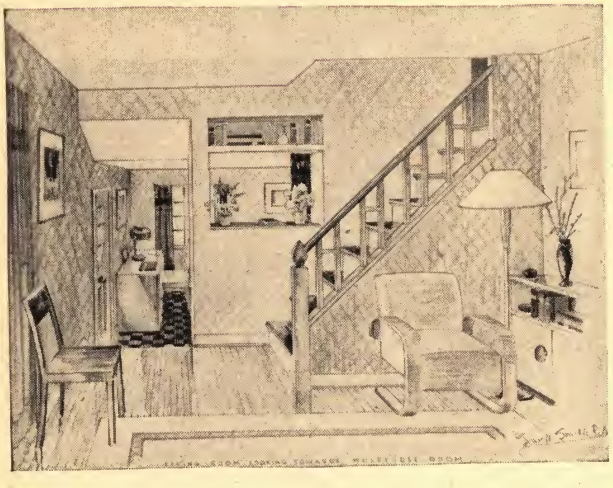
If something goes wrong with your plumbing equipment, call in a master plumber immediately. Now as never before good workmanship is important both for economy and conservation of metal. Leaks grow larger, not smaller, you know, and clogged drains become more clogged.

Take care always—repair immediately. You'll be doing your part to conserve what you have.

FURNITURE *and* DECORATION

Home environment is more important today than ever before. An attractive and cheerful background will help your family's morale. Home furnishings have a vital bearing on our attitude toward life.

Victory Home INDIVIDUALITY



WE ARE all familiar with Winston Churchill's famous statement, "There never was a time when so many owed so much to so few." If we could—every one of us—think of ourselves as the "few" and then proceed to measure our work on the basis that "so many would owe so much" to our efforts there would be an impetus to our accomplishments such as has never been dreamed of.

It is that inspiration which we all need to spur us on in our every effort, and one of the most essential ways to maintain that inspiration is the continuous opportunity to express our own individuality in some aspects of our every day living. Our work demands mass-production, but our homes can still be individual.

Because war activities demand that more people than ever before spend their working hours on assembly lines, these same people do not want to *live* on assembly lines as well. That is to say, homes should express the individuality of their owners as much as possible and not be allowed to look just exactly like one's neighbor's, with the furnishings off the same piece, as it were. Here should be maintained that good old American custom of choosing one's own home furnishings, colors, styles, and combinations. The very fact that this freedom of expression is still the privilege of the American worker is in itself inspiration for greater service. These workers, moving into their new small homes, do not have to wait for special furniture to be designed and made to fit. Right now, already available in the store in their own section of the country, can be found the style and type of furniture, the selection of fabrics, as well as the colors and combinations to make their homes as individual and attractive as though it were peace time and the homemaker were back in her former town, amid familiar contacts.

We have made a very careful research of these home-furnishings and their distribution and are convinced of the immediate availability in every area, of well-styled and practical selections. The materials available are types which are not only good in style, color, construction and workmanship, but will fit into the small home into which this worker is moving. Here the homemaker needs must plan so that the rooms will express as spacious an appearance as possible, and yet be comfortable for every member of the family. It is not necessary to scrimp, but she must plan her purchases carefully, whether she buys all new things, or if she intends to combine the new furnishings with those which she may already have.

The small home is not something new to the American public. Traveling all over this country as I have continually for the last six or seven years, has taught me that the average American family knows all about small homes—the bungalow has been popular for years! The information here will be interesting to homemakers everywhere, whether on the farm, in the small town, or in the munitions areas.

The *Victory Home*, featured in this issue, gives us the opportunity to illustrate the charm and smartness which can be achieved at low cost with furnishings available right now. The variety of colors and styles offer adaptability to everyone. The following pages graphically illustrate the many opportunities awaiting our new War-Time Homemaker. Her selections will have lasting influence and we have confidence in her decisions.

Helen T. Daggett

Decorating and Merchandising Editor.

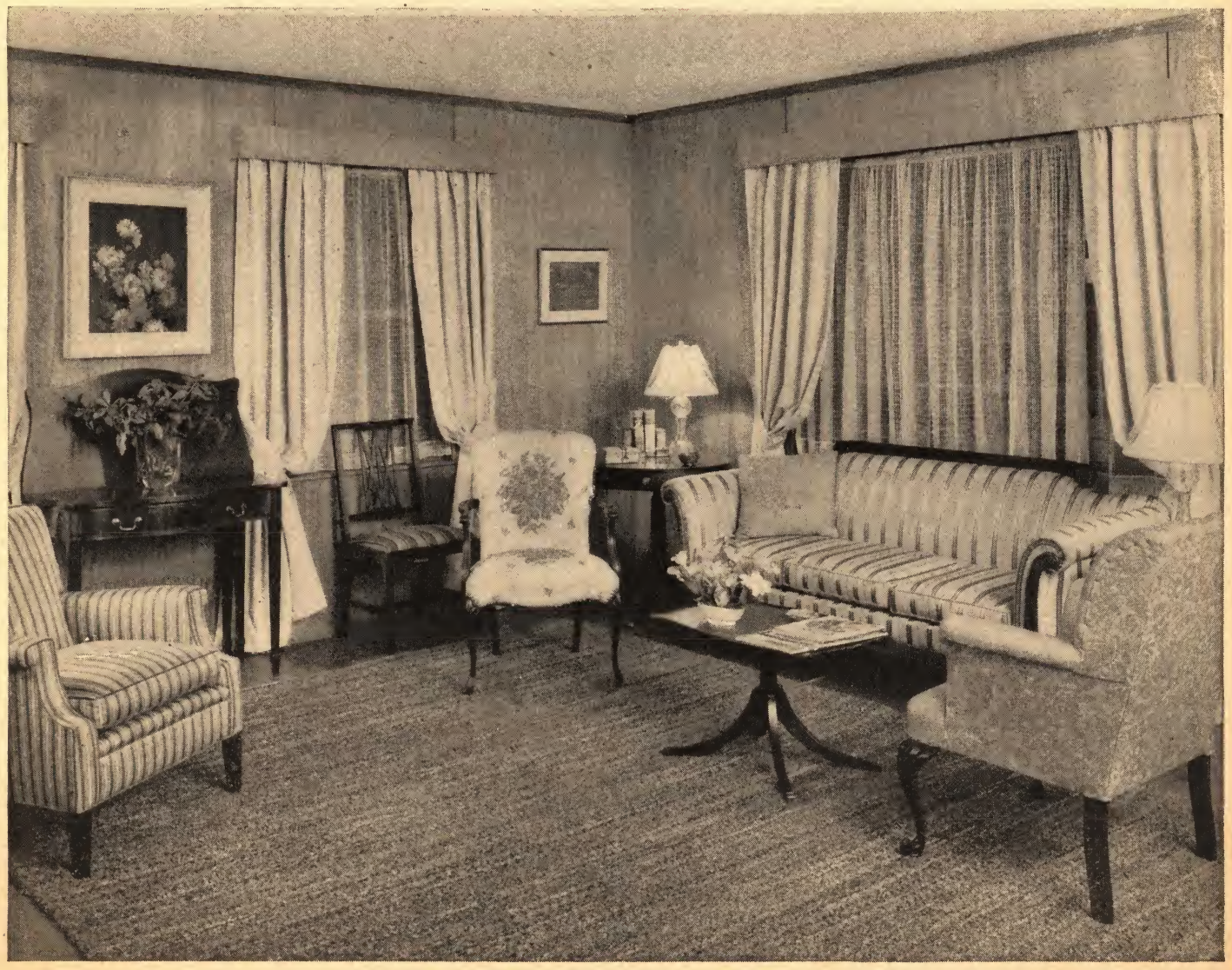
THE LIVING ROOM in the *Victory Home* is shown here as having the two outside walls paneled in beautiful walnut plywood. The cost of this treatment is very little more than plaster and paint or wallpaper, whereas the advantages of it include no replacement expense, real serviceability and enduring beauty. The finish of this wood is soft, colorless shellac which does not darken the natural walnut, then the surface is waxed, making it easy to care for. Whatever the tastes and desires of the owner, be they provincial, classical or modern, she can here give full expression to her own individuality.

For example; at the right we see a semi-modern grouping with the furniture in a lovely toasted-color mahogany. This finish is not quite as light as that we are all familiar with as "blonde" but it is a warm tan which blends beautifully with the walnut. The lace glass curtains hang next to the window itself, while the stunning cotton over-draperies, with diagonal turquoise stripes, pick up the same color in the striped upholstery of the arm chair. The rug is a texture material with shades of tan, brown, turquoise, red and green, all harmoniously blended together.

In the picture below of the same room, may be seen a more classical design of furniture. In this setting, which shows the beautiful six-foot front window, the over-draperies are of yellow and beige cotton damask. This is an amazingly effective fabric and very inexpensive. The colors in the upholstery are beige, red, turquoise, chartreuse, and soft gray-green. These colors, together with the browns of the walnut and the warm shades of the floor covering, are beautifully accented by the mahogany wood of the furniture. The table between the side windows pulls out for use as a dining table. You will note one of the chairs which goes with it in the front of the window. These occasional chairs come in very handy at times in the living room, and require little extra space.

The lamp bases are of glass which will continue to be more and more popular with metal bases becoming scarcer.

A room of this type can be arranged in innumerable ways and we have checked the various pieces of furniture and textile materials to make certain they would be available for the consumer. We have been assured that, at least when this book goes to press, all the merchandise described can be found easily and at reasonable prices almost anywhere.

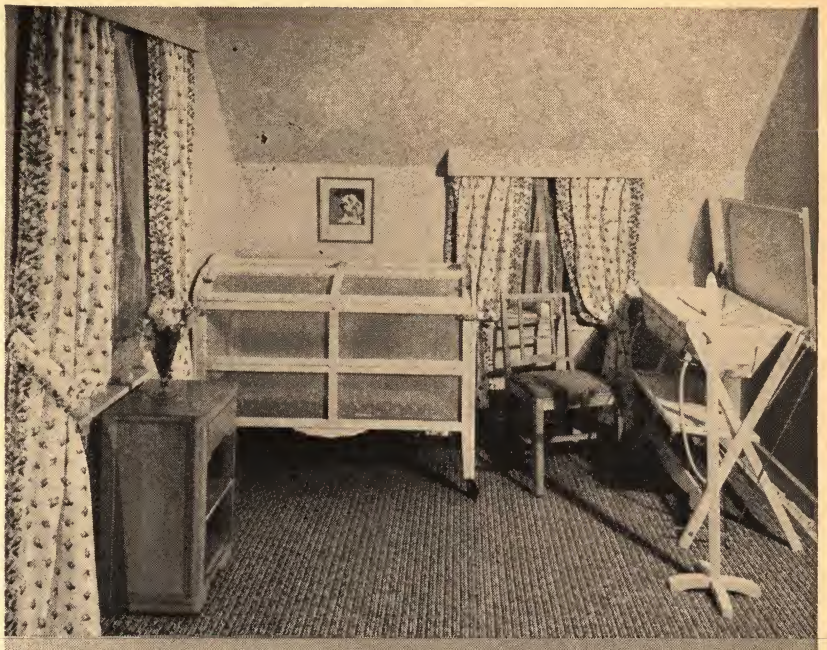


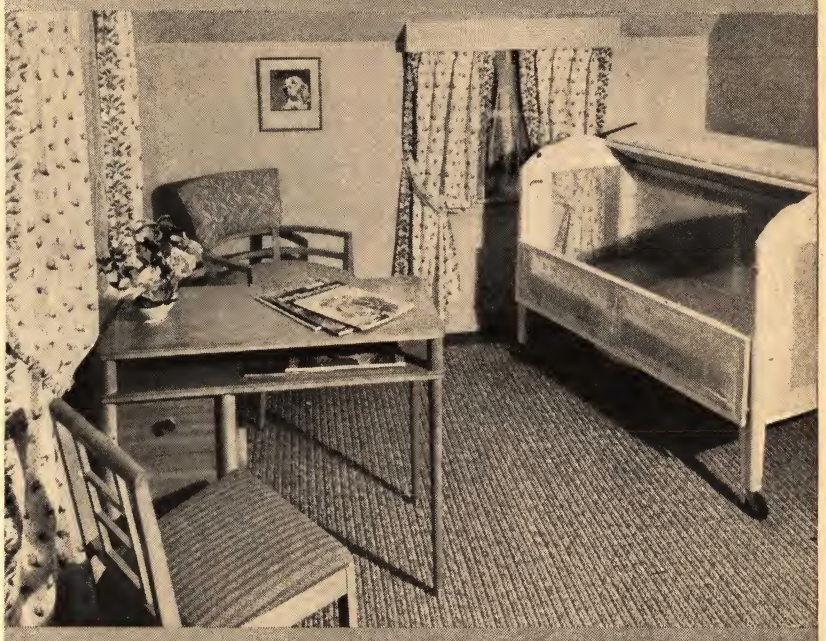
THESE PICTURES illustrate the master bedroom of the *Victory Home.* Here again is an opportunity to have the style and type of decoration and furniture one may wish, be it Early American, Modern, or Eighteenth Century.

The picture at the top right shows this room furnished with Early American maple furniture, textured floor and textured over-draperies. This furniture, while available at popular prices, embodies many construction features usually found only in maple furniture at considerably higher prices. The color is an excellent shade of maple and shows up to very good advantage with the green wall and patterned wallpaper. The over-draperies shown here are in an open textured weave of cotton material, a most interesting fabric in dusty rose and beige. In this case the valance board was painted the same color as the wall. The bedspread is gray-green and white stripe and the white dotted swiss glass curtains give a certain crisp snap to the otherwise soft colors. The textured floor covering is in blended tones of green, while the little tufted throw rug is in dusty rose.

The center picture shows the same room in a setting with the furniture Modern in design and finished in "blonde" wood. Because of the unusual shape of the room, we use wallpaper on the two gabled ends and plain paint on the long side wall. This treatment offers interest and variety and gives the room an appearance of spaciousness and greater height. The color scheme is gray-green, dusty rose and beige with touches of white for crispness. The long side wall is painted a soft gray-green while the wallpaper has a pattern of gray-green and dusty-rose and beige with touches of green. The over-draperies are of a soft glo-sheen material with a plain dusty rose stripe between the pattern of leaves which is in beige, brown and green on a white ground. White dotted swiss glass curtains are looped back underneath the over-draperies. The blonde modern furniture is made with no metal and with simple lines and rounded corners. The beautifully tufted bedspread is in tones of dusty rose, the pattern picking up the beige and green of the wallpaper and over-draperies. A very simple and interesting treatment is the valance board over these windows. It is made to stand out from the wall about 2½ inches and the curtain rod is fastened to it rather than to the wall. This board has been covered with a piece of the over-drapery material, the stripe which includes the leaf pattern running lengthwise. This is an easy thing for anyone to do and it is most effective. Note how the pattern and design balance the many plain surfaces.

HERE are the same over-draperies shown in the center picture used with Eighteenth Century mahogany furniture. This furniture has been especially designed to meet the needs and demands of the present day. In the scheme with this mahogany wood, the colors of the floor covering were chosen as having rose and beige predominate to balance the ensemble. The large double bed, dresser, and chest (the chest does not show in the picture) demonstrate the spaciousness of this room, and even with the gabled ceiling, the feeling is of a much larger room than it actually is.





WHAT a challenge confronts the average homemaker with these really small rooms! They often seem to be little larger than a closet but we have found in almost every instance, that woman's ingenuity presents amazing results in working out such problems. Her job is to make a home with what she has, and she has done so since the time of the one-room log cabin with Indian Warfare in full swing to the present small home era with World Warfare in full swing.

One of the tiniest rooms in the *Victory Home* is marked on the plans as the nursery or study. Actually, this room is only about 6'3" by 8'3" in size, and made even smaller with one wall lowered by the sloping gabled roof. Yet, with careful planning, one might be surprised to see what can be done with such a room. Four different arrangements are shown here, and more to come.

At the top right, we see a nursery complete with kiddy-coop, bathanett and costumer, and still the room is not crowded. To give this spacious feeling, the color scheme has been kept quite simple. The wall is painted a soft shell-tone of beige and the over-draperies in glo-sheen have a tiny rosebud pattern, on a white ground. Notice the valance boards in this room, painted the same color as the wall. This treatment helps to make the small window seem much longer and provides also a perfect place for the curtain rods. The floor covering is of linen texture in tones of rose and beige.

Center: this little room can serve also as a study or sewing room even though the baby sleeps here. The furniture in this setting is along modern lines, finished in light wood to keep the feeling of roominess. A small table desk and two chairs may offer a hide-away for some much needed study or work.

And below is another arrangement using a single bed in the same room with the kiddy-coop or baby's bed. In this case the over-draperies are made to hang only to the bottom of the apron of both windows, allowing room for the day-bed to slide beneath them comfortably. These curtains are also rosebud in design, though the ground color is in gray-green. The bedspread is a striped sailcloth material in soft green and white. Throw rug is a cotton tufted material in dusty rose, the design picking up green and beige, perfect in tone with other details of the room.

The picture at the top left shows another view of this room arranged as a little guest room or a young girl's room. You will note that this is a narrow day-bed, but nonetheless comfortable. The modern furniture is light finished, the floor is dusty rose and beige, walls are shell pink, over-draperies in green and rose, bedspread in green and white, lamp shade in dusty rose with glass base, and a small rose vase, holding sweet peas against the green over-draperies.

PLANNING this living room with the two outside walls in natural color walnut necessitated brightening the effect, so the inside wall of the room was papered with yellow and gray striped wallpaper, as shown in the picture at left. The effect of this treatment is gay and yet the room has a dignity, which is unmistakable. The valance board over the window is made of the same walnut plywood as the wall and forms an effective frame for the textured over-draperies. These draperies are made of cotton and are heavy enough to hang gracefully, even though unlined. Should you wish to use them as "blackout curtains" line them with dark satin and draw them at night. Simple snappers could be put on to hold them close together, and keep out all light. Modern mahogany furniture in a toasted color, the herringbone-textured over-draperies in turquoise and flowered rug in green, turquoise and beige make a delightful scheme with these two combinations of wall colors. Of particular interest is the sectional furniture which can be arranged to fit any wall space. If desired, for a longer wall than shown here, one endpiece now placed against the bookshelves could be removed, the desk shown at the right slipped in next to the shelves and the endpiece put back against the desk. These pieces come in a variety of sizes and types, with bookshelves, corner pieces, chests, desks, and endpieces, all interchangeable and useful.

The next picture shows another view of the living room with combination modern and traditional furniture. Suppose the owner happens to have a sofa and barrelled chair and yet wishes to have some modern pieces as well, this arrangement shows the possibilities of combining such pieces. The wall treatment ties in beautifully with the modern furniture. But the windows are softened with flowered glo-sheen over-draperies which, with the colorful floor covering make the different styles of furniture hold together most effectively. It is usually a question of color which makes such a scheme possible.

ANOTHER view of the master bedroom, with Early American furniture is shown below at right. This close-up view gives us better detail of the room arrangement, and though not shown here, the plan for this room allows space for a second twin bed, even allowing for a night stand in between. In this instance, we wish to show, also, detail of the tufted throw rug between the beds. The over-draperies are made to hang only to the bottom of the window apron, because of the bed's extending out past them as shown.

At the bottom (left) is still another view of the small nursery or guest room. Again, we have evidence of the possibilities for such a small room. An alternate color scheme for this room might be as follows: the walls off-white, the floor burgundy, the over-draperies in tones of yellow with the pattern including the burgundy, greens, tans, etc. The bedspread in gold and all accessories in turquoise for accent. In other words, keep the combinations simple in tone and not too much design, and the room will always be attractive.

Color Treatments

by Lucile Schlimme

President, Decorators Club, Inc.

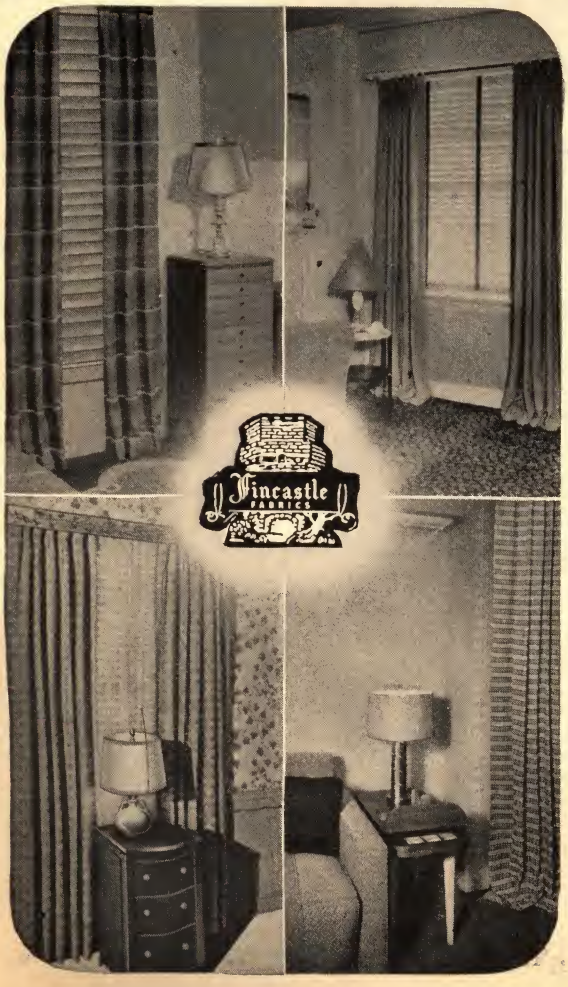
WE are engaged nationally in a tremendous program of low-cost housing to take care of the many shifts in population which have resulted from the concentration of workers on defense projects at various points all over the United States. Private enterprise is proving its patriotism in practical and effective ways by the planning and building of thousands and thousands of low-cost homes in the regions where they are needed, but which are not served by government projects. All these homes will take care of the needs of workers and their families, on whom the United Nations are depending for the materials of war to be used for the preservation and improvement of our way of living. It is of the greatest importance to all, then, that these homes shall serve in every way possible to maintain the morale and well being of those who are to live in them. Not only, then, must they be planned for the greatest convenience in doing the housework, serving meals and so on, but they must also be more attractive and harmonious than comparable homes have ever been before, and the furnishings must be planned to do everything possible to preserve a sense of restfulness, harmony, and gayety.

For some of the home owners, these new homes will represent an advancement over former living quarters and conditions. To others, they will mean a contraction, perhaps, from larger living areas. To all homemakers, however, the new home is a challenge to face forward and make the very most of the very least advantage presented, in order to be ready for whatever of progress may evolve from the effort and sacrifices we all are making to build a better world.

The very cause for which we are all engaged in a mighty war demands that the identity and individuality of each person and each family shall be preserved. While it may seem necessary in order to build these houses at a reasonable cost, to make them similar in design and layout—the actual result can be as individual in expression as anyone would desire. When the structure is completed—(and even here there are certain possibilities for variation in the room plans)—the point is reached where the personal element begins to make itself felt. Color is the element which first emerges as the obvious way to start one's individual expression of home. Literally millions of words have been written and spoken on the subject of color, but it still remains one of the most highly personal subjects of all. It is even difficult to find rooms that carry the same color impression to each one of us, but nearly everyone "knows what he likes" and with a little careful consideration and a small amount of experimentation, it should be possible for anyone to achieve harmonious and pleasing color effects in the home by following some simple rules for the application of color to specific problems of backgrounds, furnishings, and accents.

The first phase of the application of color to backgrounds is wall treatment—which includes walls, ceiling and woodwork; next we have to consider the floor covering; the third step is the placement of furniture and selection of draperies with regard to the color composition after the layout has been decided upon from the standpoint of use and convenience. The last step is the placing of color accents in the form of accessories such as lamps and shades, ornaments, book-ends, vases and ash trays.

For practical purposes, the simplest color theory is that which recognizes three basic colors, red, blue, and yellow, which at full strength are called primary colors. They are called primary colors because no mixture of other pigments will produce them. The additional colors made up of equal quantities of any two primary colors are called secondary colors. These are named green (produced by mixing yellow and blue), orange (produced by mixing yellow and red), and purple (produced by mixing red and blue). Beyond these there are mixtures called tertiary colors—but names for these variations are inaccurate and misleading and for our purposes—unnecessary. They could be called complex colors, and we usually coin our own names for them by comparison with something in our experience which is definite and familiar. *(Continued on page 78)*



There's no "Priority" on *Beauty* in the Home

Fincastle fabrics, now on display throughout the nation, make it possible to bring beauty and freshness into your home at prices so reasonable you will be amazed at how far your decorating budget will go!

The makers of Fincastle fabrics are doing their part in producing materials for the Armed Forces, but Fincastle drapery and upholstery materials, being woven almost exclusively from cotton, will continue to be made for your use and enjoyment. See the wide variety of weaves and color combinations on display for spring.

LOUISVILLE TEXTILES, INC. **1322 McHenry St., Louisville, Ky.**

To help you plan your decorating, we have published a little book—chock full of helpful hints. Send 10c in stamps or coin and a copy of "Interiors Beautiful" will be sent you.

Fincastle

Ready to hang DRAPERIES *Yard Goods*

··BUY··
DEFENSE
BONDS

Complementary colors are those which complete each other; for instance, a pair of complementary colors must contain all three primaries. The complement of green (produced by mixing yellow and blue) is red, the complement of purple is yellow and the complement of orange is blue. The greatest color contrasts are those made up of complementary colors at full intensity. *Tints* of colors are lighter or paler than these colors would be at full intensity, and *shades* are deeper or darker than full intensity. Then there are also warm colors and cool colors. The warm colors are those that have a greater quantity of reds and yellows in them—and the cool ones have the blues and greens predominating. The blue-greens would naturally be cooler than the yellow-greens. Some colors appear to fill up the areas on which they are applied, more quickly than others. The terms applied to these are *advancing* and *receding*. The advancing colors are those of deeper value and warm tendency such as dark reds, reddish purples, browns, etc. Those called receding are the cooler ones, generally,—and lighter than the advancing colors. Receding colors are the tints of blue-greens, blues, and violets. The tints of cool colors will naturally make rooms look larger than they would if done in advancing colors.

The effect of a color will multiply when used on a large area and for this reason there is a definite relationship between the value and intensity of the color used and the size of the space on which it is to appear. Then, too, the color on an adjoining space will influence the effect of any given color. For this reason we have to know how and where a color is to be used in order to judge its rightness for a given area. Optical illusions can be and often are produced by using these facts knowingly in the color compositions of rooms. The largest areas of colors in any room are the walls and ceiling; next is the floor; next the furniture coverings and the draperies and finally accessories.

To get down to actual cases, let us start with a living room in one of our *Victory Houses*. The room is not very large, so it will be advisable to use a tint for our background color which will make the room seem larger than it really is. If the windows face south, west or east where there is assurance of a certain amount of sunlight, we may choose a tint of a cool color—and since it is to be the largest area in our color composition, we shall be wise to reduce the intensity of the color chosen, by adding something to make it paler—and reduce the brilliance by adding something to make it more neutral than the primary or secondary colors would be. The door and window trims, doors, and baseboards can be the same color as the walls—sometimes a little lighter—sometimes darker—but only in rare instances should they be greatly in contrast to the walls in a room of average size—because contrasts have a tendency to dramatize an object and there is no really good reason for dramatizing doors and windows to this extent in a small house. The ceiling should usually be lighter than the wall—just as in the out-of-doors we find the sky lighter than the foliage—and, too, the ground is usually darker than the foliage. This gives us a suggestion for our floor covering. It can be deeper in value and sometimes brighter in color, than the walls. It can be either in contrast to the walls or similar in color. For instance, with a soft blue-green wall with lighter blue-green trim, one could plan either a deeper blue-green or spruce green rug, or one in eggplant or burgundy color. The spruce green would be similar in color, but a contrast in value and intensity, while the eggplant or burgundy would provide contrast in color as well as in value.

The next step is that of choosing colors for the larger pieces of furniture, usually

ABOVE is a corner of a room which combines dignity and informality. The height of the window and the treatment give a feeling of formality while the furniture and floor covering are most informal. The flowered over-draperies, however, pull the two together and make it quite interesting. Notice the lamp bases of wood and glass. At the left the boy's room with double-decker bed has all the serviceability and practical arrangement for a small house. The color scheme for this room with pine walls is green floor covering, green tufted bedspreads on beige ground, warm yellow maple furniture and yellow and green checked design in the curtains. This room has a real masculine sturdiness.

THE fabrics—textures, stripes, damasks, and flowered materials—selected for the Victory Home are available today. Notice the variety of selections—early American, Modern and Traditional to suit the taste of all homemakers.

a sofa and one or two upholstered chairs. The largest area (the sofa) should not present too much of a contrast to its background (the walls and floor) because it would then appear to take up more room than it should. The larger the piece, the more the color of its covering should tone with its background—preferably on the neutral side. In our imaginary problem of a sunny living room with the soft blue-green walls and eggplant or burgundy colored carpet, we could cover the sofa in a strié or a textured material of spruce green and the chairs could be in a patterned fabric of neutral spruce green background, with pattern in deep red, dark green, and gold. Accents in the form of accessories then can include white, red in small quantities at full intensity, and gold. The wood tones of the other pieces of furniture, probably either mahogany or walnut, will give the added richness to the complete color scheme and this will produce a sense of well-being and satisfaction to the persons who live in the room.

To some of the new owners of these *Victory Homes*, the problem of planning the colors for the backgrounds and furnishings will have no limitations imposed on them except the budget and the availability of wanted materials, since everything will have to be new. To others, the furnishing of a new home will be a challenge to the ingenuity and cleverness of the homemaker, because at least part of the furnishings will be brought along from former homes, and they may or may not fit comfortably into the new quarters. They will, in any case, either provide a springboard for the creation of a new color scheme or a direct challenge to get every bit of good out of these things while making the most of such new things as will need to be purchased to make this new home inviting, colorful and attractive.

When it is necessary to start out with several pieces of furniture which are, at best, less than new and fresh, an important thing to remember is to keep the new colors which are to provide backgrounds and companions for these older things fairly neutral or grayed, so that the old things will seem at home and the new things will not present too great a contrast in clarity of color. For instance, if the most important piece of furniture, naturally the sofa, is one which has been in use before, and the covering is, shall we say, a fairly dark tapestry, the best procedure to follow would be this: first, freshen the upholstery as much as possible by cleaning it with one of the excellent furniture cleaners on the market, then select a color for the walls, which is harmonious with the fabric—but, of course, paler, and with a neutral cast, so that it does not look too bright with the sofa covering. Deep soft colors, rather than clear bright ones, for other things in the room such as draperies, chair coverings and carpets, will do much to keep all the furnishings in the right key and everything will seem to belong in that particular room.

If the carpet and the draperies are the things that are being used from the former home, it might be a smart idea to carry the predominating color in the draperies, in a lighter value, into the walls and let the new pieces of furniture be covered with colors which will be a contrast to the walls and draperies.

From all the foregoing, which really touches but lightly on the broad subject of color, a few general rules can be laid down as guides in this important phase of furnishing a home.

Walls and woodwork should be in the same color, so as to avoid breaking up the wall spaces. This will make the room look larger than it would if trim or woodwork were in a different or contrasting color.

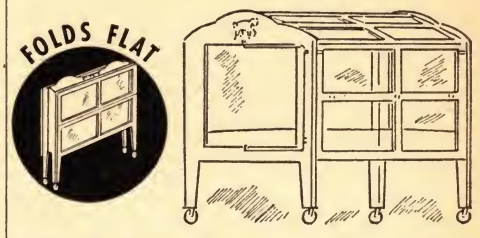
Wall colors must be toned down—not too brilliant. The largest area of color

(Continued on page 81)

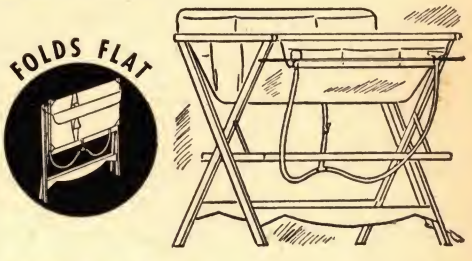
All this Safety

AND COMPACTNESS, TOO

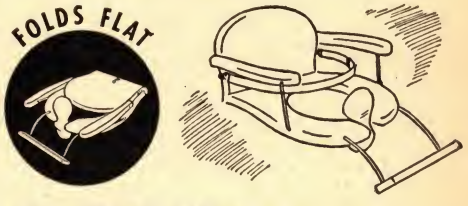
These four articles are essential to the modern nursery. They provide greatest possible safety and comfort for your baby . . . and because each one folds, they give *you* more room for living.



KIDDIE-KOOP the safety-screened crib. Usable from birth to big bed age. Keeps out pets, children and everything that creeps, crawls or flies. Complete with two-position, re-inforced spring and mattress. Quickly folded with mattress and bedding, it releases nearly six square feet of living space.



KIDDIE-BATH has "up with a touch, down with a touch" dressing table with safety-strap. Smooth, easily cleaned tub. When folded takes but little space. Universal model can be used in adult tub *or* on floor.



KIDDIE-TRAINER designed for proper toilet training. "Looks right" in the shiniest new bathroom. Has waist-line safety strap, deflector and adjustable foot rest.

KIDDIE-YARD for playtime indoors and out. Keeps baby safe and out of mischief. Because there are no center hinges or fasteners, baby can shake the solid sides to his heart's content without danger of bruised or pinched fingers. Canopy top available for outdoor use.

WRITE FOR YOUR FREE COPY of "Making The World Safe For Baby" by Beulah France, R.N. Shows how this compact furniture fits the modern small home.

TRIMBLE

Nurseryland Furniture, Inc.

20 WREN STREET ROCHESTER, N.Y.

THIS might be a reception room or vestibule four steps below the living room. Here we have paneling below and wallpaper above. The draperies are very flowered in design and the same material should be used to slip-cover some pieces in the living room. Little details such as shelves in the windows for plants and colorful accessories add much to the charm of the room and outside view.

AT the right is a detail view of attractive treatment for passageways. Very often such little cupboard spaces could be had if planned in advance and they are most useful and decorative. This picture illustrates the use of pattern as a drapery material and wallpaper lining the shelves of the cupboard with design on the floor but they are balanced by the many plain surfaces and accented with interesting accessory color notes in china and plants. Note, too, the attractive design of the cupboard framework. The corner stand is a sturdy modernized adaptation of the old whatnot.

ANOTHER decorative and simple treatment for a Victory Home bedroom. This illustrates the possibility for the second bedroom as shown on the plans. Plain walls and cut-out openings for the shelves outlined in contrasting color, give an interesting effect. The color scheme for the room is red, white, and blue. The walls are soft gray-blue accented with white, the curtains and dressing table flounce are white with the valance for window, dressing table and bed in red and white check. The textured rug is in tones of red and beige, an effective color harmony.

A HOMEY living room has been achieved with knotty pine paneling and Oriental rugs. A bamboo shade is used at the large window. This paneling increases in beauty as time goes on and makes a nice background for maps and colorful prints. Below are two suggestions for dining. At the left modern furniture, a self-tone scroll design rug in beige and tan, and a leaf designed wallpaper in French gray and rose make an attractive room and a bright one.

THIS cheerful place for dining could be a part of the living room or a separate dining room. The hook rug pattern in tones of brown, beige and green gives a perfect foundation for Early American maple furniture. The wall is painted a soft green and the ruffled Chintz curtains are in tans and browns with a deeper tone of rust for ruffles. A wall bracket with trailing ivy and four flower prints add interesting color accents, fresh, gay, and pretty.

(remember?) intensifies itself, and therefore, the wall should be kept fairly pale so that it will stay in the background.

Light colors on walls will make rooms look larger than dark colors.

Contrast is provided by putting cool colors against warm colors, and vice-versa. Because the warm colors advance more rapidly, small quantities of warm colors will balance larger areas of cool colors.

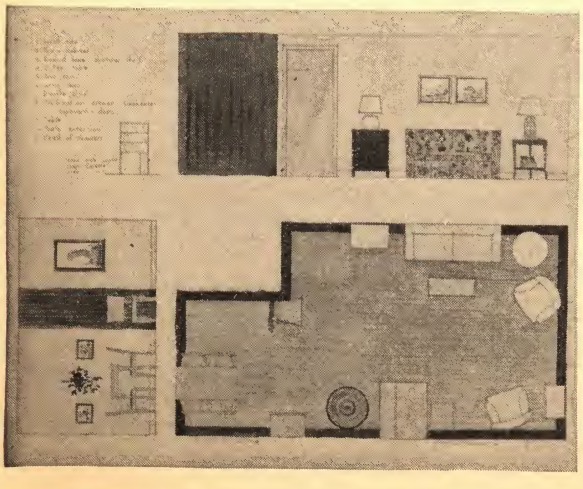
White or black, or both, may be used as accents in a room.

Follow nature in general distribution of color—the floor the darkest, ceiling the lightest, and the other things in values in between.

Choose floor coverings and fabrics before finally deciding on wall colors, as the wall color is usually the most flexible item in your color scheme. In other words, you may start out saying, "I am going to have a pale blue wall, gray and wine draperies and a wine-colored carpet and some furniture coverings in deeper blue and gray!"—but *do* have the actual carpet, draperies and fabrics selected before you decide just *which* pale blue the walls are to be. The paint, in other words, can easily be adjusted to the more static factors of textiles and carpets.

Basic color schemes should be limited to two or three colors, for walls, floor covering, draperies and upholstered pieces. Some accents may well be outside of the basic three, but it is a good idea to recall the basic colors in some of the accessories. Thus a feeling of restfulness and balance will be preserved.

If the basic principles which have been outlined here are thoughtfully followed, the new home will certainly express the comfort and harmony we all need to have around us particularly now, when our hard-won leisure has to provide the psychological build-up for the job to be done tomorrow.



FURNISHING plan for a living room and dining alcove developed by Miss Gladys Miller, Home Planning Consultant to the Public Buildings Administration. Small sofa, radio cabinet, round table, coffee table, arm chair, wing chair, dinette chairs, combination desk-bookcase-cupboard, table for dining and extension table and chest of drawers are the pieces used.

MODERN WOOD FINISHES

NEW IDEAS to Beautify Your Home

Do you long to create in your home those delicate new wood-finishing effects in lovely modern shades that have a soft, satiny sheen—some *even lighter than natural?*

You can make your home strikingly different—achieve delightful new decorative effects both inside and outside—with BREINIG BROTHERS Modern Wood Finishes.

These refreshing, economical decorative aids actually make wood—both plywood and solid wood—thrilling to live with. Protect as they beautify. Bring out the wood's natural charm without leaving the usual veneer or "built up" appearance of other methods.

BREINIG BROTHERS Modern Wood Finishes and Paint Specialties helped to beautify Collier's famous House of Ideas at Rockefeller Home Center, N.Y.C. Why not *your* house?

Use This Free Service!

Write our Wood Finishes Advisory Bureau for help in selecting correct finishes and colors for solid and plywoods. Send description and location of work, kinds of wood contemplated, architect's and contractor's names, other details. No obligation for this service.

Have you tried FIRZITE, the superior prefinisher for Fir Plywood?

BREINIG BROTHERS

HOBOKEN NEW JERSEY

PAINT

Specialists in Wood Finishes for Three Generations

CLEVER CLOSETS...

How to Get More Space and Keep Apparel Orderly..

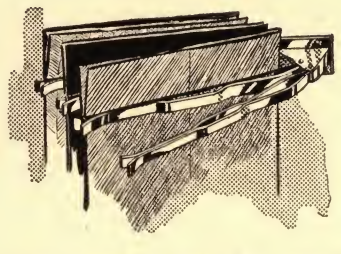
NARROW BEDROOM CLOSET becomes ever so much more handy as a result of a few inexpensive fixtures. Note the sliding clothing carrier that brings clothes out into the open. On the door: hat rack, folding tie rack, and shoe racks, make use of space ordinarily wasted.

CLOSETS are the true test of any housekeeper's ingenuity and pride in her home. Neat ones reflect care and proper consideration of clothes. Cluttered closets are dead give-aways, like finding dirt under the carpet corners.

But it's so hard, you say, to keep closets neat and orderly when they're so small and you have so much apparel that must go in them. That's true. Even in the most modern homes, many closets are still small and frequently of such odd shapes, it is difficult to use them to the best advantage. Yet there is a happy solution to the closet problem every woman faces... a complete and inexpensive answer to Mrs. America's No. 1 pet peeve.

Today, smart home owners and apartment dwellers are equipping their closets with inexpensive, smartly chrome finished fixtures which provide a handy place for each apparel item, and by making the most efficient use of *all* available space, practically double the capacity of any closet regardless of size or shape.

For example, why not make use of the back of the closet doors? You'll be amazed at the convenient gadgets which can be attached. There are hat racks which hold as many as six hats on curved brim-fitting metal rests that help preserve their shape and looks. Surely your hall closet needs one of these to take care of guests' hats as well as your own. Shoe racks keep shoes up off the floor, and save scuffing and shoe shine costs. One K-Venience tie rack, for example, holds 36 ties, each in a separate space, and twice as many by doubling up. What man wouldn't want that convenient aid to speedier dressing and for examining his collection?



This novel fixture has four clamp arms which swing independently. Each holds a trouser or skirt full length so as to maintain press. It's chrome finished and very compact.

For the small narrow closets, there are clothing carriers, of various sizes, which slide in and out of the closet on ball-bearing rollers. In this way, you can bring your entire collection of suits or dresses out into the light of the room for quick selection. Trouser - skirt hangers save lots of cleaning and pressing bills. The hangers come with several swing independent clamps, each holding a pair of trousers, full length, by the cuffs, so that wrinkles pull out naturally.

Other essential items include extension closet rods, wishbone garment hangers, towel racks, umbrella and cane holders, and fur rings. All attach easily and securely, yet can be removed and reinstalled when you move, thus making them doubly economical.

GET MORE CLOSET ROOM!

★ Keep Closets Tidy

★ Keep Shoes Off The Floor

★ Keep Trousers In Press

★ Keep All Apparel Handy

INSTALL K-VENIENCE CLOSET FIXTURES...

These clever, modern fixtures make the most of any closet size or shape . . . keep clothes orderly . . . speed dressing . . . save cleaning and pressing bills. Over 40 sturdy chrome-finished items—shoe, hat, tie and towel racks; clothing carriers, trouser-skirt hangers, etc. Attach easily to closet doors or walls. At department and hardware stores or sent direct. Write for FREE CATALOG describing these useful K-Venience fixtures, and giving suggested installation plans which will help you eliminate your closet worries. MAIL COUPON NOW!

KNAPE & VOGT MFG. CO.

Dept. S-4, Grand Rapids, Mich.

( ) Send free K-Venience Catalog and space-saving closet plans.

Name _____

Address _____

GARDENING

Keep 'em growing! Flowers, vegetables, and a beautiful lawn are the biggest builders of morale today. Make your yard into an outdoor living room and enjoy it to the fullest with your family and friends.

SO YOU'RE GOING TO BUY *A Lot!*

So you're going to buy a lot! You may be buying to build right away, or you may, as many persons do, be buying a lot to build on in the future. Whatever you're going to do, there are certain basic factors that you should use as a guide in selecting your homesite.

What About the Neighborhood?

Does the neighborhood in which you have selected your homesite have APPEAL? The approach to the neighborhood should not be through an unsightly area, and if possible, should be geographically located so that there are broad vistas and pleasing views. Of more importance, in considering the appeal of the neighborhood, is that of well-kept homes, grounds and streets. The buildings in the immediate neighborhood should be attractively designed, and should harmonize with each other and theirs physical surroundings. A most desirable factor in the selection of your neighborhood should be its uniform development. The houses should be about of the same size, age, and general character. Remember, that a new house among old ones suffers in value, and that small houses among larger ones are at a disadvantage, when it comes to resale. Harmonious variety of structure adds to the charm and appeal of the neighborhood, and rigid standardization of architecture should be avoided. In order for you to get the most happiness out of your future home, you should try to select a neighborhood in which there are other people whose mode of living and income are predominately similar to your own.

Are There Any Special Nuisances in the Neighborhood?

Look out for billboards and service stations in the immediate vicinity of your homesite. They certainly deter from the appeal of your home. Offensive noises, produced by industrial establishments, also act to decrease the appeal of the neighborhood. This is especially true during the present war production program, when most industrial organizations are working all through the night.

Are There Any Special Hazards in the Neighborhood?

Be sure that the land is not too low. If it is, you may be subjected to intense summer heat, poor circulation of air, fogs, and perhaps even floods. Avoid areas through which high speed traffic flows. Not only is this a safety hazard, but it is noisy and disturbing. Smoke, chemical fumes, gases, stagnant ponds or marshes, excessive heat or dampness are all health hazards and should be thoroughly investigated before selecting a homesite.

What Are the Neighborhood Facilities?

Is there a shopping center nearby? This factor is more important now with decreased retail deliveries. Your neighborhood shopping center should be within convenient walking distance, because you may not be able to jump into your car and go shopping, and your retailers may not be able to effect deliveries as readily as before, because of the shortage of tires and trucks. In these trying times, you must make some provision for relaxation, and so, you should be sure that there are theaters, parks, playgrounds, libraries and churches within a convenient distance of your home site. If you have children, see if there are grammar and high schools near your proposed home.

Are There Adequate Transportation Facilities?

The rationing of new automobiles and tires increases the importance of this factor. You must see to it that your homesite lies close to lines of transportation, such as buses, street cars, or commuting trains. Unless you take this factor seriously under consideration, there is a possibility that you might find yourself with a serious transportation problem on your hands when the tires on your present car become unsafe.

Are Public Utilities Provided?

Have telephone service, gas, electricity, and street lighting been provided for in this neighborhood? With increasing material restrictions, your municipality may find it difficult or even impossible to extend its present pipe lines and wiring to an undeveloped area. It is important, therefore, that you ascertain that these services are available, or that your locality lies in the direction of planned development. In this same category, you should investigate the police and fire protection services in your neighborhood.

About Size, Shape, Physical Characteristics, and Location

Is it too narrow? If so, you will find it difficult to plan your house, and if there are surrounding houses, or if there will be, you will suffer from a lack of privacy. *Are its boundaries irregular?* If so, it will be difficult for you to get full utilization of the land. *Is it rocky?* Yes? Then you must expect additional costs in clearing. *Is it wet?* Yes? Then you will have to spend money to drain it off, and perhaps provide permanent drains. A corner location is preferred, of course, because it gives you two outlooks and more lawn space. (The drawbacks are added cost, less privacy, more sidewalks to keep clean, and additional lawn to mow.)

Are Zoning Restrictions Adequate?

Although the present surroundings may be satisfactory now, have provisions been made to keep them that way in the future? Investigate the local zoning regulations and laws. If the zoning ordinances are not properly drawn up and enforced, you may find yourself living in the heart of an industrial or commercial neighborhood, with accompanying inconveniences, in the future. Where adjacent lots or blocks possess altogether different restrictions, or if you are directly in the line of industrial or commercial development, the effect of existing restrictions may be voided.

What Taxes Will You Have to Pay?

Look into the level of taxes that you will have to pay. Is the rate low? Even if they are, there is the possibility that local assessments for garbage, ash collection, etc., will bring your tax bill up considerably.

VICTORY GARDENS

GARDEN V FOR VICTORY

EDITOR'S NOTE: The Washington Chapter of the American Women's Voluntary Service has organized a course in Home Gardens. Cooperating with it are the Department of Agriculture and other horticultural authorities. We wish to express our appreciation to Mrs. L. Corrin Strong and Mrs. Chase Donaldson of the American Women's Voluntary Service, and to B. Y. Morrison, W. H. Youngman, J. Morton Franklin, Dr. Roy Magruder, Mrs. Doretta Klaber, Miss Cary Milholland, L. W. Kephart, Mrs. Margaret Dreisbach, Dr. Charles Mahony, and Dr. Ernest Cory, for their aid in the preparation of this material.

"FOOD is fundamental to the defense of the United States . . . On a foundation of good food we can build anything . . . Without it we can build nothing . . . We want to make sure that everyone in the United States has in his diet enough energy, enough bone, blood, and muscle-building food, enough vitamins, to give that feeling of 'health plus' . . . We want to make sure that our millions are so fed that their teeth are good, their digestive systems healthy, their resistance to premature old age enhanced through strong bodies and alert minds." This quotation is from a recent speech made by Mr. Henry A. Wallace, Vice-President of the United States. To give impetus to these ideas, the Farm Security Administration has requested that our country grow one-fifth more produce during the war.

"Vitamins for Victory" is a popular slogan of this war. Our soldiers must be well nourished . . . as well as the defense workers in factories and all of our allies. In Napoleon's time, two soldiers in the field could be supplied by one civilian. Today, in mechanized warfare, the work of twenty-one civilians is required to maintain one soldier in the field. The ratio between soldier and civilian has been just that heavily reversed.

A war is being waged on the home front against hunger and malnutrition. This home battle will go on, regardless of how long the war lasts, until every child and adult is receiving enough of the right kinds of foods. Many centuries ago man learned that certain physical defects and diseases could be prevented or cured by eating certain articles of food. For example, eating generous amounts of the livers of animals was known by the Egyptians and Chinese as early as 1500 B.C. to improve vision in dim light. Only recently has it been learned that the vitamin A in animal livers is responsible for this improved visual adaptation in persons who have received too little of it in their diets.

The first duty of every woman is to see that her family is well-nourished. We have a big job to do and we don't want to suffer again the tremendous toll that influenza alone took in the last war. This is something that every individual can do—stay well to help win the war.

The Secretary of Agriculture, Claude R. Wickard, is vitally interested in this Defense Garden Program, which we have renamed "Victory Garden," but is eager to avoid the tragic mistakes of 1917 and '18. "I hope there will be no move to plow up the parks and lawns, as in the First World War," he has said. In short, there will be plenty of food for all—including vitamin-filled vegetables and fruits.

The real value of the *Victory Garden* is the good that the gardener gets out of it. By devoting our extra physical energies, our growing knowledge of horticulture and the measure of our dreams to gardening, we make our particular spots of earth more abundant and more beautiful. In addition, we assure ourselves superior and healthful foods, rich in vitamins and minerals, and we have the satisfaction of watching things grow. There is no better escape from worry and the nervous tension of the emergency than gardening. It builds morale. As it is true that "an army fights on its belly," it is equally true that a civilian population helps win a war by its morale.

But the grand strategy of the home front cannot succeed unless it includes another important factor—flowers and ornamentals generally. It is as necessary for the maintenance of morale to grow flowers as it is necessary to supply the body with fresh vegetables. Here is a country that annually sells and sets into its gardens, for instance, between 20 and 25 million rose bushes. The public demand indicates the necessity. A rose, an iris, a peony, may do more for us in hours of stress, worry and doubt than a bushel of parsnips or a ton of dehydrated carrots. A lilac in full flower definitely revives the spirit, as our English friends assure us, when one comes out from an air raid shelter. No matter what's worrying you, keep

THE WINDOW GREENHOUSE offers no end of opportunity to grow flowers in rich profusion when outside is bare and lifeless. It is ideal for starting seed for an abundant supply of husky plants to set outdoors later.

Totty's Ten Roses $7.50
DELIVERED

FOR that new garden of yours, here are ten roses that in number of varieties, range of color and length of blooming period, can't be beaten. Strong full-rooted plants that will bloom freely first year.

All of them are lovely Hybrid Teas that will come thru average winters with just ordinary care.

Another offer well worth your while is our **25** Chrysanthemums for only **$5.** All fine varieties in all colors, giving you a bloom range from mid-July until freezing weather.

Send 25c for catalog, which cost will be deducted from the amount of your order.

Totty's
MADISON
NEW JERSEY
Box 21

Victory Garden Kit No. 1 $3.50

Garden of 200 square feet (10′ x 20′) Regular value $4.00

Finest seeds to plant this garden with succession crops.

Tomatoes (Rutgers)
Parsnips (Hollow Crown)
Radish (Scarlet Globe)
Spinach (Bloomsdale)
Spinach (Virginia Savoy)
Carrots (Chantenay)
Beets (Early Egyptian)
Peas (Thomas Laxton)
Beans (Bountiful)
Lettuce (Big Boston)
Swiss Chard (Lucullus)
Parsley (Dark Moss Curled)
Cabbage (Flat Dutch)
Kohl Rabi (Early White Vienna)

10 lbs. Vegetable Vitalizer, ½ pint concentrated Spra-Tox, 1 lb. Victory Garden Dust. 2 Copyrighted bulletins showing plan of this garden with concise directions and other gardening information.

Victory Garden Kit No. 2 $5.50

Garden of 500 square feet (20′ x 25′) Regular value $6.75

Finest seeds to plant this garden with succession crops.

Lettuce (Big Boston)
Lettuce (Black Seeded Simpson)
Carrots (Chantenay)
Tomatoes (Rutgers)
Beets (Early Egyptian)
Wax Beans (Surecrop Wax)
Kohl Rabi (Early White Vienna)
Beans (Bountiful)
Peas (Thomas Laxton)
Corn (Golden Cross Bantam
Swiss Chard (Lucullus)
Parsley (Dark Moss Curled)
Cabbage (Flat Dutch)
Parsnips (Hollow Crown)
Bush Lima (Fordhook)
Turnip (Purple Top White Globe)
Radish (Scarlet Globe)
Spinach (Bloomsdale)
Spinach (Virginia Savoy)
Onion (Southport Yellow Globe)

20 lbs. Vegetable Vitalizer, 1 pint concentrated Spra-Tox, 2 lbs. Victory Garden Dust. 2 Copyrighted bulletins showing plan of this garden with concise directions and other gardening information.

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Address_____

Town_____ State_____

VICTORY GARDENS . . .

your garden; keep up its flowering beauty. It will help not only your morale, but that of your neighbors.

Plant Fruit Trees

Americans have become a great nation of fruit-eaters, but in recent years there has been a decline in the home growing of fruit. We have depended on easy and quick transportation to bring fruit to our tables. More and more of that transportation will be needed for our armed forces.

We need to build up national health by exercise, and one of the easiest ways to exercise is to work in a garden. We need gardens not alone for the products of gardening, but also for the physical benefit derived from gardening. We need more people with soil-grimed hands. We need more of the sweat of which Mr. Churchill so eloquently speaks. Without health, what can anyone defend?

We should also learn the defense of the soil itself. We will have a chance to correct some of the evils perpetrated against the land by our careless forefathers. Today the nation is facing a grim penalty of floods, soil erosion, dust bowls, topsoil washed downstream or blown away, due to the wasteful farming methods of previous generations of Americans. Each man in his garden, whether his acres be few or many, can adopt intelligent methods of soil cultivation so that the waters descend into the earth, instead of rolling off it. On the small place, this may merely require cover crops; on the larger, strip planting and contour plowing. Whatever land you have, learn to cultivate it with an eye to restoring its capacities for lasting fertility and preventing its destruction by the elements.

Each of us should determine to make our plot of land bring forth greater increase in food, health, and the sustaining beauty of flowers so that our town will be a better place in which to live.

How to Plan the Home Garden

FOOD FOR FREEDOM

Make a plan on paper of the intended garden space, drawing it to the scale of one inch for each eight feet. An easy way to do this is to get some checked paper. It is usually squared off in ⅛ inch distances. This would mean that every square would represent a foot in your garden.

Show the location of the house, garage, trees, shrubs and such other properties as may be there.

Determine which part of this area you wish to develop into a vegetable, flower, or fruit garden.

Choose the stock you wish and select the plants or seeds from a good catalog, taking care to observe that those selected will grow where you intend to plant them. For example, will the plant grow in the shade or must it have full sun? Can it stand exposure or must it be protected? Is it an annual, biennial, or perennial? How much space should each item be allowed?

Stake out the plot according to size you intend to plant, using cord to get straight lines. The chart shows distances between rows for various plants.

Pre-Planting Work

The soil must be tilled to (a) prepare a fit seed bed; (b) eliminate weed growth; and (c) improve the physical condition of the soil.

Soils pulverize and work best when they contain a proper amount of moisture. Cultivation when too wet may injure the structure of a heavy soil by puddling it so that intractable lumps and clods are formed. Cultivation when it is too dry may break it into lumps that are difficult to reduce. The more sandy and lighter the soil, the smaller is the opportunity of improving its structure by proper tillage and the less the likelihood of damaging it by improper tillage.

The first tillage of a compact soil loosens it. If the soil is wet, this aerates and warms it. If the soil is dry, it puts the surface in condition to resist runoff and facilitates the penetration of water. The first tillage operations are generally of necessity with deeper implements. Subsequent cultivation with lighter implements prepares a seed bed and prevents the growth of weeds, compacts the soil and smooths the surface.

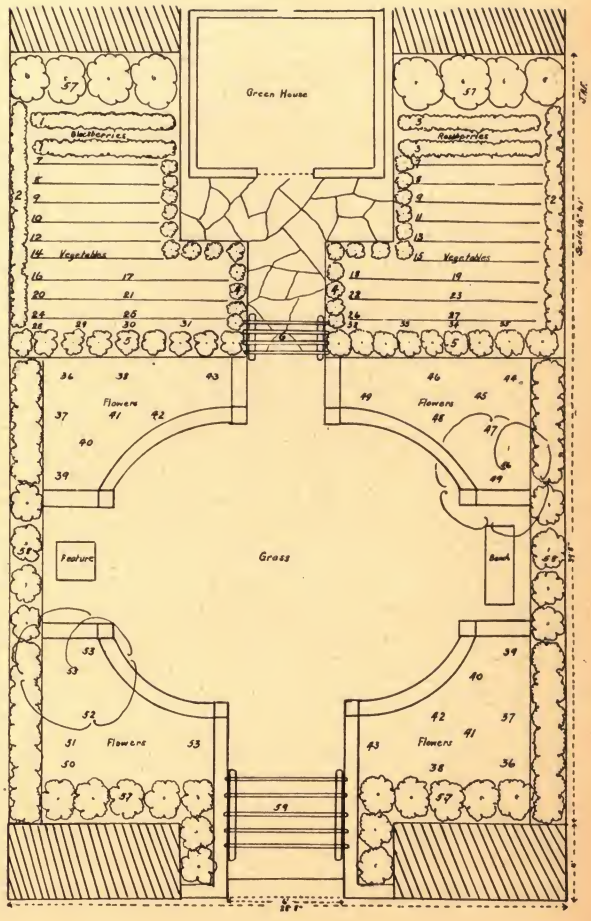
Effect of Tillage on Nitrification

The advantage of early preparation of a seed bed may lie largely in the opportunity for accumulation of a store of nitrates. This is a highly important consideration where the nitrogen content of the soil is low. Heat, moisture, and oxygen are essential to bacterial activity. Tillage creates favorable conditions for this purpose.

Cultivation to destroy weeds or prevent their growth and to conserve soil moisture provides conditions that are also most favorable for nitrification.

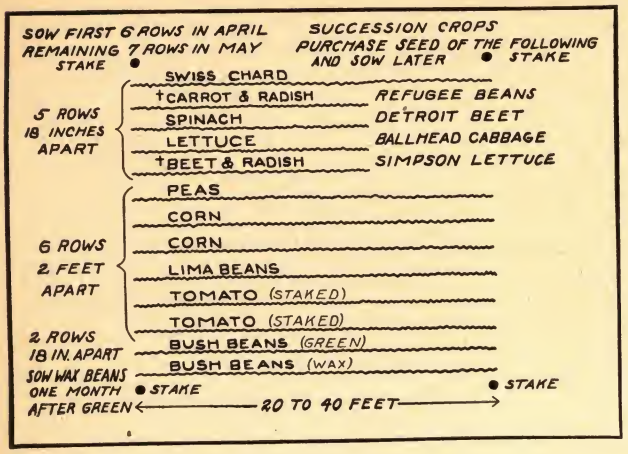
(Continued on page 88)

THIS VICTORY GARDEN, although confined to a comparatively small plot, contains many features frequently found only on large private estates. From the front, one obtains a beautiful vista of the entire area through a rose covered arbor. The first half consists of a lovely oval panel, of velvety turf, enclosed by a low stone wall which forms triangular beds in the four corners. These beds are filled with annual and perennial flowers. The cherry tree, the apple tree, grape arbor, berry bushes and the attractive greenhouse are interesting features of this garden. At the right is shown the detail of this plan. The numbers listed above are a key to the positions of the various items on the plan. There is really an amazing selection of fruits, vegetables, herbs and flowers you can plant.



The numbers shown on the plan are a key to the positions of the various items on the plan at right. **Fruits:** 1. Blackberry Joy. 2. Boysenberry New Hybrid. 3. Raspberry Taylor. 4. Strawberry Starbright. 5. Blueberry Cabot. 6. Grape Caco. **Vegetables:** 7. Tomato Winsall. 8. Sweet Corn Cream O'Gold. 9. Pea Dwarf Alderman. 10. Bush Bean Tendergreen. 11. Wax Bean Unrivalled. 12. Pepper California Wonder. 13. Broccoli Riviera. 14. Egg Plant New York Spineless. 15. Kohlrabi Purple Vienna. 16. Cabbage Early Jersey Wakefield. 17. Cabbage Red Acre. 18. Turnip Purple Top White Globe. 19. Swiss Chard Green Plume. 20. Best Early Blood Turnip. 21. Carrot Tendersweet. 22. Chinese Cabbage Chi-hi-li. 23. Mustard Spinach. 24. Spinach Summer Savoy. 25. Radish Early Round Dark Red. 26. Lettuce New York. 27. Endive Golden Heart. **Herbs:** 28. Catnip. 29. Sage. 30. Wormwood. 31. Lavender. 32. Rosemary. 33. Thyme. 34. Winter Savory. 35. Sweet Marjoram. **Flowers:** 36. Delphinium Pacific Hybrids. 37. Hemerocallis Hybrids. 38. Gaillardia Giant Hybrids. 39. Linaria Blue Shades. 40. Columbine American Hybrids. 41. Nemesia Yellow. 42. Scabiosa House's Hybrids. 43. Nemesia Blue. 44. Hollyhock Indian Spring. 45. Cleome Pink Queen. 46. Antirrhinum Madonna. 47. Antirrhinum Melody. 48. Schizanthus Pink Shades. 49. Dianthus Ruffled and Frilled. 50. Nicotiana Affinis Hybrids. 51. Acroclinium Sensation Giants. 52. Schizanthus Dr. Badger. 53. Nemesia Rose. 54. Dianthus Ruffled and Frilled. **Background Material:** 55. Sour Cherry Tree. 56. Apple Tree. 57. Canada Hemlock. 58. Taxus Hedge. 59. Climbing Roses.

VICTORY GARDENS . . .



TWELVE most popular vegetables can be grown according to this plan in about 20x25 feet. If your plot is larger you can add borders of flowers, parsley and herbs.

Nitrogen in the soil promotes lusty growth of dark green leaves and stems.

Effect of Tillage on Plant Disease Control and Insects

Fitting the soil is an important factor in the control of plant diseases or in avoiding damage by them. Generally tillage that provides conditions favorable to a vigorous growth helps plants to escape damage by diseases.

The Hessian fly, European corn borer, hibernating cut worms, as well as white grubs, grasshoppers, and crickets can be destroyed by proper tillage.

Ashes Improve Soil

Ashes from wood or coal have long been used and recommended for the improvement of lawns and garden soils. Small-sized ashes may be used without screening. Larger ashes may be sifted through a screen having openings of ¼ inch. Half of the ashes may be placed on the ground before spading, and the other half added afterwards, and raked well. Heavy applications may be made at one time to small plots, or ashes may be spread thinly over a large area each year, thus gradually improving the soil.

Garden Tools

Only a few good, lightweight sensible tools and implements are actually needed in the home garden. The gardener must buy the kinds which meet his individual needs.

Spades and *forks* should be strong, well-made but not too heavy. The regular nursery spade is satisfactory for digging, transplanting, and general work. A regular spading fork, with flat pointed steel tines and an English digging fork with four pointed, solid steel square tines are both desirable.

A common seven-inch beet *hoe* is a good type, but be sure it has the proper balance and right "feel" in the hand. An iron *rake* is necessary for smoothing over seed beds and breaking up rough ground. *Trowels, dibbles,* and *garden lines* all serve a useful purpose.

Care of Garden Tools

Tools should be cleaned and oiled well before winter storage. A well kept tool makes any job easier and gives better results. Dirty, rusty spades and hoes do not slide into the soil or make clean cuts. It is important to keep these and other similar tools with a sharp cutting edge throughout the season. Any tool which comes into contact with the soil should be cleaned after each job, as soil will adhere to a dull and rusty tool. When the wheelbarrow is put up for the winter, give it a good coat of paint or clean and oil it.

Selecting Varieties for the Home Garden

Home-grown vegetables are superior to the best of vegetables obtained from other sources, chiefly because of their freshness. Many superior all-purpose varieties can be used to best advantage, if the gardener will make successive plantings. For instance, Charlevoix sweet corn and Tendergreen beans planted several times at ten-day intervals furnish the best sweet corn and snap beans throughout an entire growing season. A spring planting of Detroit dark red beet and Chantenay carrot followed by a summer planting of the same varieties furnishes a continuous supply of tender roots for immediate use, canning or winter storage.

The tomato is the No. 1 vegetable of this war. It is high in vitamin value and can be served in many appetizing ways—as juice, sliced in salads, or cooked, with or without accompaniment. To serve a family of four one hundred times will require but two dozen plants.

Root vegetables take the least amount of space and are therefore ideal for a small garden. Suggestions are onion sets, beets, turnips, parsnips, salsify, carrots, celery, pepper, and witloof. Broccoli, cabbage, pole beans, lettuce, chard, spinach, and radish are the best of the leafy vegetables to grow in a limited space.

Don't try to grow potatoes, peas, squash, cucumbers, eggplant, okra, muskmelons, watermelons, or sow onion seeds in a small garden. These require more space.

There are many new and frequently overlooked vegetables of merit. Green sprouting broccoli and Brussels sprouts are easily grown and with kale and collards are probably the most healthful of the cabbage group. Savoy cabbage, cauliflower and kohl-rabi are delicately flavored and adapted to home gardens.

Celeriac or turnip rooted celery requires relatively little attention, but yields fragrant tops for use fresh or dried, and large crisp celery flavored roots for storage. Chinese cabbage or celery cabbage, sown in midsummer, yields large firm heads in the fall. Witloof or French endive is a salad delicacy which can be raised at home, and forced in the basement as wanted for winter use. Leek is a delicately flavored relation of onion. Okra, a staple in Southern cookery, can be grown

SPRING FLOWERING BULBS
by MAX SCHLING

OLD GLORY
Our Famous American Grown Tulip Mixture **$3.00 for 50, $5.00 per 100, $48.50 per 1,000.**

(Reserve the best corner of your garden for some Max Schling Seeds and Bulbs)

The phenomenal success of our past bulb season leads us to adopt a plan more courageous than anyone has ever dared.
In order to spur your determination to have greater numbers of lovely Tulips and Narcissi next spring we are taking special orders at very special prices for fall 1942 delivery far in advance so that you can plan and buy while this year's flowers are at the top of their beauty.
Genuine savings are offered up to 25% and more with guaranteed delivery and MAX SCHLING top-size quality.

OREGON TRAIL NARCISSI and DAFFODILS

Every variety in this mixture is a double nosed bulb, varying in size according to variety. All fine, strong bloomers. **$3.95 per 100; $7.50 per 200.** (5% discount for cash with order).

All Orders Postpaid to 4th Postal Zone

ALSO—Spring Gardening Catalog of flower and vegetable seeds on request.

MAX SCHLING SEEDSMEN, INC.
614 MADISON AVE., NEW YORK, N. Y.
All bulbs presented here for fall 1942 delivery.

easily in Northern gardens. New Zealand spinach is not a true spinach but yields repeated cuttings throughout the summer and fall from spring-grown seed.

Parsley and chives deserve a spot in every garden, as do many of the herbs, notably broad-leaved sage, summer savory, thyme, dill, sweet basil and lavender. These herbs combine beauty, fragrance and utility, as well as economy in these days of restricted commerce.

Germinations and Time-to-Plant Schedule

Responsible seedsmen protect their customers' interests by selling only seeds of dependable vitality. It is false economy to buy cheap seeds. A good seed catalog will be of invaluable help to you in suggesting varieties, climatic conditions required, and type of soil.

Generally speaking, hardy seeds such as cabbage, peas, beets, spinach, carrot, radish, onion, and lettuce can and should be sown as soon as the soil can be worked in the spring. Sweet corn, cucumber, squash and pumpkin must wait until after all danger of frost is over. Young plants of eggplant, pepper and tomato, from seeds sown under protected conditions, 5, 6, or 8 weeks earlier, should be put in the open as soon as the late frosts are gone.

Successive spring and summer plantings of many kinds of vegetables are recommended as a means of maintaining a continuous supply of tender crisp garden produce.

Depth of Planting

Gardeners tend to sow seeds too deeply. The smaller the seeds are, the shallower they should be sown. Seeds should be sown deeper in light soils than in heavy soils. Seeds should be sown sufficiently deep to keep them in moist soil for germination and still shallow enough to allow the seedlings to reach the surface. Intimate contact between the moist soil and the seeds may be established by firming the soil by pressure with the feet over the freshly covered row.

Flowers in the Home Garden

In troubled times, people need flowers even more than in years of comparative peace. The flower garden produces more than flowers. It brings health to the active gardener, beauty to the world. Its cultivation is a contribution to morale, tranquilizing the spirit, fortifying unsettled minds. Flowers have a tested therapeutic value and working in a flower garden has proved to be one of the ways of acquiring patience and seeing the world through hopeful eyes.

Flower Classifications

Flowers may be classified according to their general character, as: *annuals* —completing their life cycle in one growing season; *biennials*—blooming the second season after seed is sown; *perennials*—surviving more than one year on the same root; *bulbs; tree* and *shrub blooms;* and *vines.*

To choose flowering plants from a modern catalog, the gardener must decide what class and description he wants. A few points to study are: height of plant; time of blooming; color of flower; its texture and form or size; suitability to soil and other characteristics of the location; life expectancy (annual or perennial); and ease of culture. The beginner should choose flowers easy to grow and able to thrive under a wide variety of conditions.

Planting Suggestions for the Flower Garden

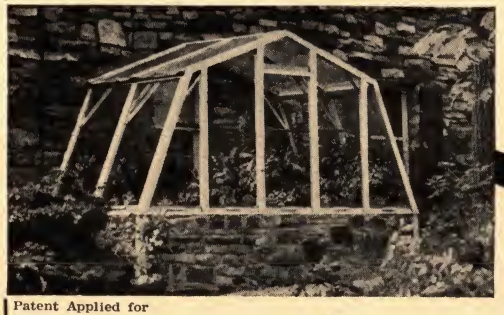
Fall planting: all perennials, except those blooming in late fall (chrysanthemums, asters, etc.); perennial seeds (in cold frames); spring-flowering bulbs; flowering trees and shrubs; seeds of hardy annuals in the open ground. Iris, peony, hardy lilies, and Oriental poppies must be planted in the late summer or fall. Roses are ideally planted in October or November, although most people plant them in the spring. *Keep 'em growing!*

VITAMINS and Important Sources

Vitamins	Best Sources
Vitamin A	Fish liver oils; liver and other glandular meats; butter; cream; egg yolk; green and leafy vegetables; yellow foods including tomatoes.
Thiamine (vitamin B_1)	Pork; legumes; liver and other glandular meats; lamb, veal and beef; whole grain cereals; whole wheat or enriched flour and bread; milk; egg yolks; fruits and vegetables.
Riboflavin (vitamin B_2)	Liver; kidneys and other glandular meats; veal, lamb, pork and beef; milk; eggs; fish; legumes; green and leafy vegetables; legumes.
Niacin (Nicotinic Acid) (a factor of the vitamin B complex)	Liver and other glandular meats; veal, pork, lamb and beef; milk; eggs; fish; legumes; whole wheat or enriched flour and bread.
Pyridoxine (vitamin B_6)	Meat (muscle tissue); glandular meats; fish; whole grains; milk.
Pantothenic Acid (a factor of the vitamin B complex)	Liver and kidney; whole grains; milk; meats.
Vitamin C	Fruits, especially citrus fruits; tomatoes; vegetables.
Vitamin D	Fish liver oils; fat fish; liver; vitamin D milk; eggs; irradiated foods; sunshine.
Vitamin E	Seed oils; leafy vegetables.
Vitamin K	Pork liver fat; hemp seed; soybean oil; rice bran; leafy vegetables; cereals.

Enjoy A Greenhouse On Your Home

for Only $9.00 a Year



Patent Applied for

Right: A two-section Orlyt Glass Garden which may be purchased for about $9.00 a year with your home, including foundation, on F.H.A. Plan.

Easy-to-Put-Up Made in sash sections easy for you or your builder to attach to your home. Width 13 ft. Any length in multiples of 2½ ft.

NEVER BEFORE could you add so useful a room to your home at such a low cost—a glass garden to raise seedlings, fresh vegetables and flowers all year 'round—a health room for sunbathing—a play place for youngsters—a room that has a hundred uses, yet costs less than a room of any other practical construction.

Size 5 by 13 ft., ready for you or your builder to attach to your home. Furnished complete, in sash sections, including double strength glass cut to right size and shape. Superstructure and door cut-to-fit and painted.

The knocked-down greenhouse parts may be purchased from us, and the foundation from your builder with your home for about $9.00 a year on your F. H. A. Plan. Our Cash Price is $98.50. Also available on usual easy payment plan.

Guaranteed for one year against damage by wind and hail. Easy to heat from home. Carefree Automatic Ventilation, longer lengths and other variations available, if you wish—See Booklet No. 15.

For $13.50 a year you can get a 50% larger Greenhouse 7½ by 13 ft. with your home on F.H.A. Plan, including foundation.

Lord & Burnham Company

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LORD & BURNHAM COMPANY,
Irvington, N. Y.
Please send me your FREE booklet, No. 15, telling about the Orlyt Greenhouse which I can attach to
☐ a home I plan to build
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Name_____

Address_____

Town_____ State_____

HOW TO RAISE A GOOD LAWN

YOU will live in your yard this summer—much more than you ever did in the past. You will have a garden. You will raise vegetables, of course, but that is not all. The Department of Agriculture recommends that you continue your flower beds and your grass plots. Flowers and lawns will sustain morale. For new homes you should plan definitely to make the surroundings beautiful.

The appearance of any yard is no better than the lawn. Just as no artist could paint a beautiful picture on a tattered and torn canvas, no homeowner can expect shrubbery and flowers to beautify his yard, unless the lawn is well-knit, weed-free, and smooth.

You cannot raise a good lawn without good soil. Everybody realizes the importance of this fact, but few people do the work, before planting grass seed, or developing sufficient fertile soil. This soil, the seed bed for your lawn, should be loamy, friable (mix sand with clay soils, or vice versa), well drained, rich in humus (the decayed vegetable matter in the top-soils that makes soil a dark color), not sour like a swamp, not acid like barren New England land (acidity can be corrected by dusting lawns with powdered limestone) and this good soil should extend the depth of grass roots, eight to twelve inches.

Once you are certain of satisfactory soil you can turn your thoughts to the characteristics of grass. Why are some lawns weed-patches while others attain a velvety smoothness? Because there are two kinds of grass. Many varieties of grass are like annual flowers, short lived. When they die the place where they once grew is taken over by whatever seed happens to be lying in that spot—and soil is always filled with weed seeds. The other kind of grass is made up of the perennial varieties. They live, when properly cared for, over periods of several hundred years, and form our so-called "permanent" lawns. Permanent grasses grow such a thick tangle of roots that whenever a weed seed sprouts, the grass roots choke the weed to death.

Therefore, when you buy grass seed, always examine the analysis tag showing the mixture's contents; make sure it contains a proportion exceeding 50% of grass varieties that are permanent. Look for grass names like Kentucky Bluegrass, Colonial Bent, Chewings Fescue.

Lawn seed mixtures containing perennial varieties, which mature slowly, should be planted in the fall. Then the hot summer sun will not kill the small grass plants. (In spring, you can make a temporary planting of a mixture running strong to annual grasses—but remember that for permanency you must always make another planting, running strong to perennials, in the fall.) Lawn seed mixtures with a large percentage of permanent varieties, which require a longer time to produce seed, are naturally higher in cost, but since a lawn sown with them does not have to be re-planted year after year, this good lawn mixture costs less in the long run.

However carefully you plant, no good lawn will remain beautiful without good care. Grass exhausts the food elements in the soil. Feed an established lawn with a 10-6-4 fertilizer each year about Labor Day. (Fertilizers intended for flowers or vegetables do not give sufficient leaf nourishment to grass. Always use a 10-6-4 fertilizer containing over 50% organic nitrogen.) If your soil is acid, apply powdered limestone in the spring every third year. Learn how to water a lawn properly. A surprising number of lawns are ruined by the heat when homeowners go away during the summer. Unusual as it may seem, daily watering is not necessary. In fact, short daily waterings are usually harmful. The trick is to soak the soil thoroughly. Water should be applied in a fine spray, on one spot, for two hours. It is not necessary to stand and hold a garden hose pointed at one spot for that time. Use a sprinkler, and move it to new positions at two hour intervals. The water will soak to the grass roots, and keep the grass plants completely alive.

You are going to raise vegetables in your yard, naturally. But how about the rest of the yard? You want the entire plot to look attractive. So make sure your lawn is beautiful. Grass is like the meat course of a dinner—it makes or breaks it. For your grass insist on a seed mixture *adapted* to your growing conditions. And that means Woodruff. Ask your dealer about

WOODRUFF
Adapted LAWN SEED
F. H. Woodruff & Sons, Inc. Main Office: Milford, Conn.

MAKE IT YOURSELF

Ideas to Help You Enjoy Your Back Yard

AN easy way to forget tire rationing this summer is to fix up your yard as an attractive outdoor sitting room and place for meals. Your family and friends will enjoy the satisfaction which comes of being out in the open, and we don't need to tell you that food has an extra deliciousness when it is cooked out of doors. Too, entertaining in your own yard can be informal and inexpensive. Hamburgers broiled over an open fire, a huge wooden bowl of green salad (perhaps from your own garden) and the appetizing aroma of coffee add up to a genuine treat. An extra special gesture of good will and hospitality would be to invite some soldiers, who are on leave in your vicinity, for a supper cooked in your yard. They will enjoy the simplicity and home life of such entertaining.

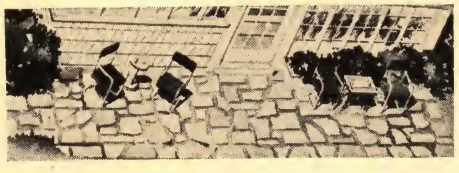
The furnishings for an outdoors sitting room can be easy to make.

Outdoor Fireplace

An outdoor fireplace is fun for your family and guests. Complete instructions for building a full-sized unit of brick with oven and grill.....25c

Menus For Outdoor Cooking

"Cooking Al Fresco" from East to West by Phyllis Jervey and Peggy Steele. This pamphlet, compiled by two widely-traveled Army wives, contains six complete menus for out-of-doors cookery. Charcoal embers in your outside fireplace seal in the juices of meat and fish to perfection! Mrs. Jervey and Mrs. Steele have selected famous dishes from Haiti to Hawaii which have made a terrific hit with the armed forces in our far-flung outposts. Yet these menus are practical and inexpensive and appeal to all ages. They add a touch of glamour to your everyday fare. Send for these enticing recipes.....25c



Terrace

A terrace adds materially to the value of your home and its enjoyment. A formula for building a brick, concrete or flagstone terrace that will not crack or disintegrate.....$1.00

Flagstone

A flagstone walk or "stepping stones" is much less expensive than a concrete walk from sidewalk to your entrances. It is much more attractive, especially when the "stepping stones" are tinted to blend with the paint on your house. They are easy to make with our instructions. 25c

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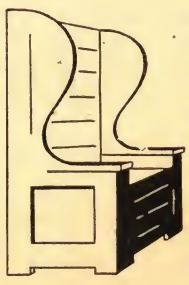

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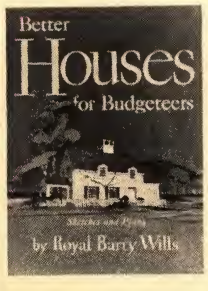

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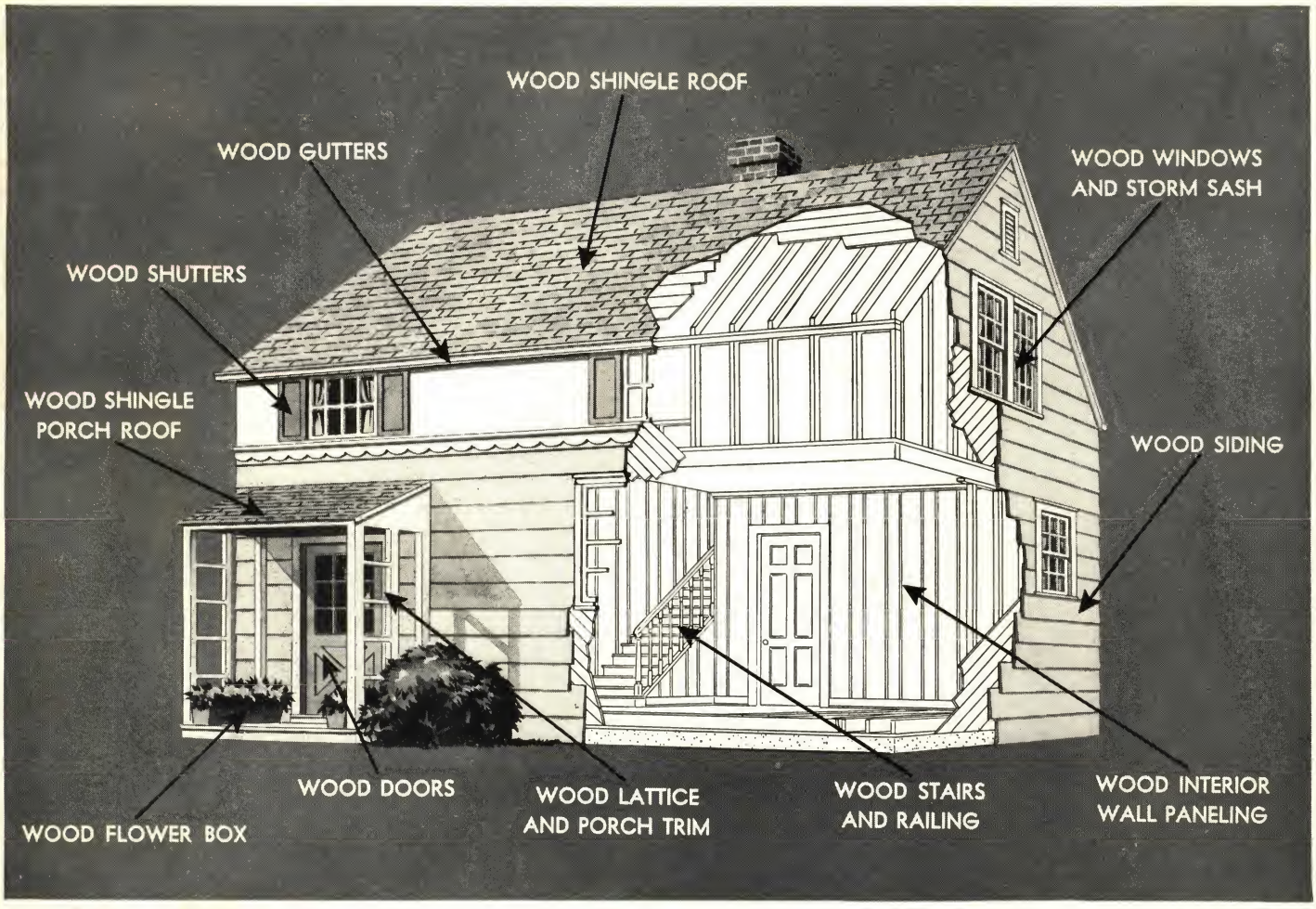

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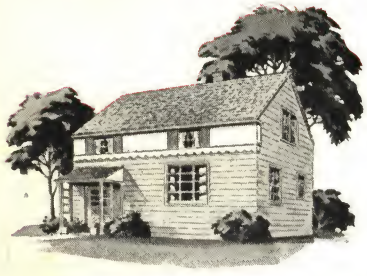

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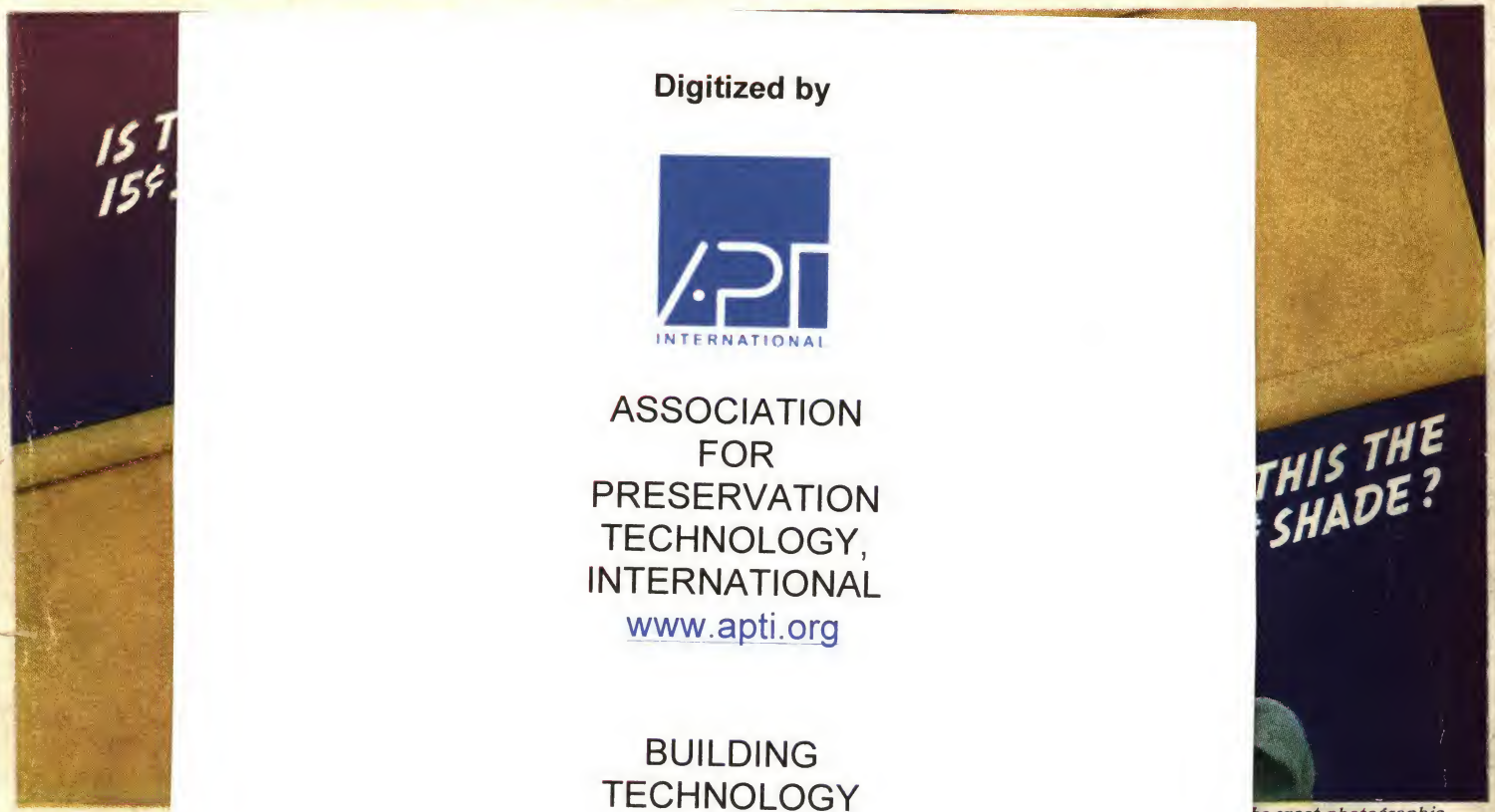

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